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Final Environmental Assessment

**Grand Junction
Conversion
Transmission Line
Project**

U.S. Department of the Interior
Bureau of Land Management

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Enclosed for your review is the final environmental assessment (FEA) on the Grand Junction Conversion Transmission Line Project, a proposal by Public Service Company of Colorado (PSCC) to upgrade its existing 69,000 volt transmission system in the Grand Junction vicinity to 230,000 volts. The FEA contains a proposed amendment to the Management Framework Plan (MFP) for Roan Creek and Winter Flats, an area that includes the Little Book Cliffs Wild Horse Management Area. The amendment would permit granting a right-of-way to PSCC through the Wild Horse Management Area. The amendment is necessary because the existing MFP does not provide for new rights-of-way in that area where a portion of the 230,000 volt transmission line would cross.

Comments on the environmental assessment should be directed in writing to the District Manager, Bureau of Land Management, 764 Horizon Drive, Grand Junction, Colorado, 81501, by October 10, 1984.

The proposed MFP amendment may be protested. Any person who participated in the process by which the amendment was developed and has an interest which is, or may be adversely affected by the approval of this amendment, may protest such approval. A protest may raise only those issues which were submitted for the record during development of the FEA and the amendment and should be filed with the Director (202), Bureau of Land Management, U.S. Department of the Interior, Washington, D.C., 20240. To be timely, a protest must be filed by October 10, 1984, (the end of the 30 day protest period). A protest must contain the following information:

1. The name, mailing address, telephone number, and interest of the person filing the protest;
2. A statement of the issue(s) being protested;
3. A statement of the part of the amendment being protested;
4. A copy of all documents or issues that were submitted during the EA and amendment process by the protesting party or an indication of the date the issue(s) were discussed for the record;
5. A concise statement explaining why the State Director's decision is believed to be wrong.

At the end of the 30 day protest period, the proposed amendment, excluding portions under protest, shall become final. Approval shall be withheld on any portion of the amendment under protest until action has been completed on the protest.

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Sincerely,

Kannon Richards

Kannon Richards
State Director

FINAL ENVIRONMENTAL ASSESSMENT
ON THE
GRAND JUNCTION CONVERSION TRANSMISSION LINE PROJECT
AND AN AMENDMENT TO THE
ROAN CREEK/WINTER FLATS MANAGEMENT FRAMEWORK PLAN

Prepared by:

Bureau of Land Management

U.S. Department of the Interior

A handwritten signature in dark ink, appearing to read "Kanner Richard", is written over a horizontal line.

State Director

Colorado State Office

COVER SHEET

GRAND JUNCTION CONVERSION TRANSMISSION LINE PROJECT ENVIRONMENTAL ASSESSMENT

☐ Draft

☒ Final

Lead Agency

U. S. Department of the Interior
Bureau of Land Management

EA Contact

Questions and comments on this environmental assessment should be directed to:

Julia Dougan
Bureau of Land Management, Grand Junction Resource Area
764 Horizon Drive
Grand Junction, Colorado 81501
(303) 243-6552

PREFACE

This is the Final Environmental Assessment (FEA) for the Grand Junction Conversion Project proposed by Public Service Company of Colorado (PSCC). On March 27, 1984, a Draft Environmental Assessment (DEA) was issued by the Grand Junction Resource Area Office of the Bureau of Land Management for this project. On April 3, 1984, two public hearings were held at the BLM office in Grand Junction to solicit public input. The public comment period was officially closed to written comment on April 25, 1984.

This document is an abbreviated FEA which means that it includes only corrections to the draft, comment letters with responses, and additional analysis which was conducted subsequent to the DEA in response to public and agency comments.

The most notable changes between the Draft and Final EA involved changing the proposed route for the Horizon-Fruita Segment, and the creation and analysis of several additional alternatives for the Cameo-Fruita Segment. There was a consensus of agency and public opinion against Alternative BB (through Walker Wildlife Area) as the proposed alternative for the Horizon-Fruita Segment. Alternative J had scored better overall in the original analysis, but Alternative BB had been chosen as the preferred due to objections by the Town of Fruita to Alternative J crossing through town, and concern from the Mesa County Planning Commission about visual impacts to U.S. Highway 6 & 50 from this alternative. Because of the general objection to Alternative BB, coupled with the greater receptivity by the Town of Fruita, the proposed route for the Horizon-Fruita Segment has been changed to Alternative J which parallels the D & RGW Railroad for most of its length (see revised Figure 2-1). A comparison of these alternatives is provided in the Summary section and Chapter 2 of this document. Additional discussion of Alternative J is presented in Chapter 4.

On the Cameo-Fruita Segment, there was a concern about impacts to agricultural land. Two new routing concepts were proposed as a way of reducing these impacts. The first concept was to utilize I Road as a portion of the connection between Cameo and the new Fruita Substation. From this concept, various alternatives were developed and evaluated. These all proved unfeasible due to conflicts with the Walker Field expansion aircraft approach zone. This is discussed in Chapter 2 of the FEA under Alternative 119, as an alternative considered but rejected.

The second concept suggested was to stay further to the north and west on BLM land before entering the developed portion of the Grand Valley, and then to utilize primarily vacant land along drainages to connect to the new Fruita Substation. Six new and different alternatives were developed and evaluated. These are Alternatives XX, YY, ZZ, AAA, BBB, and CCC. Alternatives XX and YY were subsequently dropped as unfeasible, and are discussed in Chapter 2 as variations to Alternative 120 which was considered but rejected. The remainder of the alternatives proved to be feasible and, in fact, Alternatives AAA and CCC are now added to the primary alternatives for the Cameo-Fruita Segment. These routes are discussed in the Summary section and Chapter 2 of this report. The full numerical ratings for all these alternatives are presented in Appendix A.

In addition, concern was voiced about effects on wildlife and the wild horses from those Cameo-Fruita alternatives which would cross the Wild Horse Management Area. Alternatives considered but rejected numbers 101 and 102 were reconsidered as a result. These are discussed in greater detail in Chapter 2.

In all cases, the company proposed alternative and the agency preferred are identical.

All public and agency written comments and their written responses are presented following the appendices.

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SUMMARY

Public Service Company of Colorado (PSCC) proposes to upgrade its existing 69,000 volt transmission system in the Grand Junction vicinity to 230,000 volts. The existing transmission system is already operating above its capacity during peak periods and would be unable to serve future demands. After analyzing four load growth scenarios, five cases which modeled alternate systems were examined under similar loading conditions, and PSCC selected a medium growth scenario as the best indicator of future system loads. The medium growth scenario assumes five percent annual growth in electric demand through 1985 and 3.5 percent annual growth through the year 2010. On the basis of this estimated growth, PSCC determined that converting the existing system to a 230,000 volt (230-kV) system would best serve the needs of customers in the Grand Junction vicinity.

This environmental assessment has been prepared to assess the impacts of upgrading the existing transmission system and also addresses the impacts associated with amending the Management Framework Plan (MFP) for Roan Creek and Winter Flats, an area which includes the Little Book Cliffs Wild Horse Management Area. The MFP adopted for this area does not provide for the establishment of new rights-of-way; construction of a portion of the proposed action would require amending the MFP specifically for the right-of-way and construction associated with this project.

DESCRIPTION OF PROPOSED ACTION

The proposed project involves the construction of approximately 55.5 miles of 230-kV transmission line, construction of two new substations, and modification of four existing substations. Approximately 45.9 miles would be located on a new alignment, 6.8 miles would replace existing 69-kV transmission lines and follow the same general alignment, and 3.0 miles would be constructed parallel to existing 69-kV lines. The location of the proposed new transmission lines and substations are shown in Figure 2-8, Proposed Action. In all cases, the proposed action alternatives are identical to the agency preferred.

In addition to constructing new 230-kV transmission lines, the proposed project includes modification or removal of much of PSCC's existing 69-kV system in the Grand Junction vicinity. Approximately 8.7 miles of the existing 69-kV system will remain in service at 69-kV, 16.7 miles will be modified to carry lower voltages, and an additional 36.9 miles will be removed. In addition, approximately 2 miles of existing 69-kV line in the vicinity of the Mount Garfield Substation will be relocated. The locations of these actions are shown in Figure 2-11, Utilization of Existing 69-kV lines.

For purposes of organization and simplicity, it is convenient to subdivide the overall 55.5 miles of new transmission line into distinct segments. Four segments have been defined: Cameo-Fruita, Horizon-Fruita, Grand Junction-Clifton-Colorado Ute, and Horizon Tap-Grand Junction.

The Cameo-Fruita segment consists of a 30.8 mile transmission line that would be constructed between PSCC's Cameo Power Plant and a new substation that would be constructed near the Gary Western Refinery west of Fruita. This is the segment of the proposed project which would affect the Wild Horse Management

Area and would therefore require an MFP amendment. This portion of the project would be constructed primarily using wood H-frame structures. These structures have an average height of 75 feet and an average right-of-way width of 100 feet. Revised Figure 2-9, Typical Structure Types, provides an illustration of a wood H-frame structure. Single wood or steel poles would be used to minimize the right-of-way requirements and impacts to cropland where appropriate.

The Horizon-Fruita segment consists of a 11.2 mile transmission line between PSCC's Horizon Substation at F 1/2 and 25 1/2 Road and the new substation west of Fruita. Most of this segment would be constructed with single column wood poles (of which approximately 1.3 miles would be double circuit 69/230-kV), and some portions (approximately 4 miles) would utilize single column steel poles. Single column wood poles have an average height of 80 feet and an average right-of-way width of 60 feet; single column steel poles and the single column wood poles used for the 69/230-kV double circuit average 95 feet in height and have a right-of-way width which varies from 20 to 60 feet. These structure types are illustrated in Revised Figure 2-9.

The Grand Junction-Clifton-Colorado Ute segment consists of an 11.7 mile transmission line between PSCC's Grand Junction Substation near downtown and a new substation that would be constructed in the Clifton vicinity. A transmission line would also be constructed between the new Clifton Substation and an existing Colorado Ute Substation. This segment of the project would utilize a mixture of structure types, single column steel poles, single column wood poles, and wood H-frames, but more than half would utilize single column wood poles (see Revised Figure 2-10).

The Horizon-Grand Junction segment is the shortest segment and involves approximately 2.2 miles of transmission line from a point near PSCC's existing Redlands Substation and the Grand Junction Substation. This segment would complete a connection between the Horizon and Grand Junction Substations and would be located on the same general alignment as an existing PSCC 69-kV line. Single column steel poles would be used on this segment.

As noted, the project also involves the construction of two new substations, one west of Fruita near the Gary Western refinery and one in the Clifton vicinity, near E 1/4 and 33 Road. The Fruita Substation will require a site of approximately 4.75 acres and the Clifton Substation will require a 2-acre site. Structures within the proposed substations will be approximately 60 feet in height. Other equipment (approximately 25 to 35 feet in height) will include buses, switches, circuit breakers, transformers, and a control building.

In addition, several existing substations will be rebuilt or modified to operate at 230-kV. These include PSCC's Grand Junction, Horizon, and Cameo Substations and Colorado Ute's Grand Junction Substation. As a result of these improvements and new substations, PSCC's existing Redlands, Meridian, and Cipolla Substations will be taken out of service. All electric equipment will be removed and all structures associated with the electrical equipment will be dismantled and removed. Subsequent dismantling and removal of the structure foundations, buildings, and fences will depend upon the size and location of new customer loads that develop within the respective substation's service areas which may require reconstruction at 230-kV.

COMPARISON OF ALTERNATIVES

A large number of alternative locations or corridors were evaluated for the proposed transmission facilities. Alternatives which were evaluated in detail are shown in Revised Figure 2-1, Network of Alternative Transmission Line Corridors; more than 100 alternatives were evaluated. An even larger number of alternatives were considered but later rejected for environmental or engineering reasons. These are described in Chapter 2, Alternatives Considered but Eliminated From Further Analysis, and are shown in Revised Figure 2-6.

Alternatives were evaluated by mapping and documenting land use and other environmental conditions along each corridor and then identifying any potential conflicts or impacts that would result from construction and operation of a transmission line. The purpose of the evaluation was to identify the alternative for each segment of the system that minimizes land use, visual, and other resource conflicts. As a guide for identifying and organizing potential impacts, alternatives were evaluated using eight criteria:

- o Residential and Other Property
- o Agricultural Lands
- o Removal of Trees
- o Visual Prominence From Homes
- o Visual Conflicts
- o Recreation Areas
- o Biological Resources
- o Physical Resources

These evaluation criteria were developed and refined through a review of applicable land use plans and policies relating to transmission line siting and through public review and comment obtained at a series of public meetings. Public review and comment was solicited at eight public meetings which were held at key points in the study process. These meetings, including a series of scoping meetings held by the Bureau of Land Management, are described in Chapter 1 of the DEA.

After applying the evaluation criteria, alternatives which minimize land use and resource conflicts could be identified. These alternatives, which are called primary alternatives, were then evaluated in greater detail. The results of this analysis are summarized below. The process used to evaluate alternatives and the detailed results of the analysis are described in Chapter 2 and in Appendices A and B.

Cameo-Fruita Segment

Seven primary alternatives were identified for this segment. They are identified as Alternatives A, F, V, AA, WW, AAA, and CCC on Revised Figure 2-1, Network of Alternative Transmission Line Corridors. Alternative A is the proposed alternative; it stays generally north of the Grand Valley in order to minimize conflicts with urban and agricultural land uses. Overall, Alternative A is successful at minimizing impacts; no significant impacts are expected to physical resources, biological resources, cultural resources, or land use. The main concern associated

with Alternative A is visual. Approximately 5.1 miles of its eastern portion is located on a new alignment within the BLM's Little Book Cliffs Wild Horse Management Area. Although relatively few people would see the transmission line in this location, the area is scenic and is generally in a natural condition. A new transmission line in this area would be a visual intrusion which would diminish the area's natural setting. An additional 3.0 miles are on an existing alignment within the Wild Horse Management Area. Impacts to the wild horses in this area would be insignificant due to measures committed to by PSCC which include: (1) no construction during the foaling period, (2) use of helicopter construction where existing access is insufficient, thereby causing negligible surface disturbance and loss of forage, and (3) a minimum of human activity due to a short-term construction period and only an occasional need for inspection during project operation.

Alternative F and the proposed alternative have a common alignment in the Book Cliffs, and therefore this alternative has the same visual impacts as were described for the proposed alternative in the Wild Horse Management Area. At a point approximately six miles northeast of Fruita, the two alternatives split and Alternative F follows an alignment which is generally located along M Road. As a result of being further south in an area that is more developed, Alternative F would have more impacts than the proposed alternative. As compared to the proposed alternative, Alternative F has a significantly higher level of potential conflict with residences and other property, will require the removal of more trees, and will be seen from substantially more homes. Specifically, Alternative F would affect 9 more residences through the acquisition of right-of-way, require the removal of 15 more trees, and would be seen as prominent or evident from 38 additional homes. The proposed alternative has an estimated cost of \$3.6 million, compared to \$4.7 million for Alternative F (costs are based on 1983 dollar values).

Alternative V is also common with the proposed alternative over most of its eastern portion, including the segment through the Wild Horse Management Area, but is located further south in the Fruita vicinity. Upon entering the developed area, Alternative V is generally located along L Road. The proposed alternative has similar advantages over Alternative V as were described for Alternative F, except more so. Alternative V, as compared to the proposed alternative, would affect 15 more residences through the acquisition of right-of-way, require the removal of 14 more trees, and would be seen as prominent or evident from an additional 135 homes. The estimated cost of Alternative V is \$4.4 million or \$800,000 more than the proposed alternative.

Alternative AA also has a common alignment with the proposed alternative over more than half the distance between Cameo and Fruita. Unlike the other alternatives, however, Alternative AA is common with the proposed alternative in its western segment in the Fruita vicinity, but follows a different alignment in the Book Cliffs. As a result, Alternative AA and the proposed alternative have a similar low level of impacts associated with proximity to homes and visual prominence from homes, but have dissimilar impacts on other visual resources. In essence, a choice between the proposed alternative and Alternative AA represents a choice between creating visual impacts in a scenic, natural setting that is seen by relatively few recreationists versus creating additional visual impacts in a scenic setting that is viewed by many people. Although Alternative AA crosses less of the Wild Horse Management Area (3.7 miles on an existing alignment), it would descend the Book Cliffs in full view of I-70 and then parallel the highway in

close proximity for more than a mile. Under Alternative AA, the existing 69-kV line would be left in place in this location and converted to double circuit in order to serve Garfield Substation. The new 230-kV line would be on wood H-frame structures adjacent to the double circuit 69-kV line in this area. As a result, Alternative AA would create substantial visual change which would be seen by a much larger number of viewers.

In addition to visual issues, the proposed and Alternative AA differ on resources. The proposed alternative would have lower impacts on physical resources by avoiding more miles of soils that are susceptible to erosion. The estimated cost of Alternative AA is only slightly higher than the proposed alternative: \$3,619,000 compared to \$3,566,300.

The fifth primary alternative in the Cameo-Fruita segment is Alternative WW, which is a variation of Alternative AA. Alternative WW differs from Alternative AA by staying just to the north of Mount Garfield on Link 2a, then connecting with and utilizing the western portion of Link 2. From this point on, it is common with Alternative AA. Because of their primarily common alignment, these two alternatives have similar impacts. The primary differences are associated with crossing the Little Book Cliffs Wild Horse Management Area and related visual impacts. Alternative WW would cross more than 2 miles of the wild horse area on a new right-of-way compared to none for Alternative AA. However, Alternative WW is located on a new right-of-way for approximately four miles less through the wild horse area than the proposed alternative.

Visual impacts also vary between the two alternatives. Alternative WW descends the Book Cliffs through a notch on the west side of Mount Garfield. Although distance (1 1/2 to 2 miles from I-70) would reduce their visibility, three or more structures would be seen in views to Mount Garfield, a major scenic feature in the Grand Valley. However, this alternative would avoid the other visual impacts from I-70, which were previously described for Alternative AA, and would result in less visual change in the wild horse area than the proposed alternative, Alternative A. Alternative WW would cost approximately \$3.6 million.

Alternative AAA is common to the proposed alternative in the eastern half through the Book Cliffs. From the base of the Book Cliffs, Alternative AAA follows a variation of Link 7/8 further to the north and west of the proposed to 17 1/2 Road (extended) just north of the Highline Canal. It utilizes portions of the undeveloped lands along Big Salt Wash (Link 98) to L Road, then turns west on L Road following Links 30, 31, and a portion of Link 95 into the proposed Fruita Substation. A comparison of Alternative AAA with the proposed alternative shows that Alternative AAA has less effect on agriculture but greater effects on all seven of the other criteria. The greatest differences occurred in the categories of trees removed and visual prominence from homes, in which Alternative AAA scored significantly worse. Alternative AAA is estimated to cost \$4.3 million, or approximately \$700,000 more than the proposed.

Alternative CCC is common to the proposed alternative in the eastern half through the Book Cliffs. From the base of the Book Cliffs Alternative CCC follows a variation of Link 7/8 further to the north and west of the proposed to

17 1/2 Road (extended) just north of the Highline Canal. It then utilizes portions of the undeveloped lands along Big Salt Wash and the East Branch of Reed Wash (Link 100) to Link 95, which it follows for the remaining distance to the proposed substation location.

The proposed alternative rated generally better on four of the eight criteria, while Alternative CCC rated better on two criteria of public concern: agriculture and visual prominence from homes. The two alternatives scored nearly equally in recreation and biological resources. In residential and other property the proposed alternative scored slightly better for affecting three fewer residences with acquisition of right-of-way and more closely following existing rights-of-way. Its advantages in visual conflicts result from one less skylined pole, and in physical resources from fewer miles in the desert land where soils are more subject to slump and creep and moderate erosion hazard. On the other hand, the proposed alternative would affect 14 more homes with views to the line and result in the location of poles in or at the edge of cultivated lands over a distance of approximately 2.7 miles (19 poles) greater than Alternative CCC. Alternative CCC is estimated to cost \$4.0 million, or approximately \$400,000 more than the preferred.

Horizon-Fruita Segment

Five primary alternatives were identified for this segment. They are identified as Alternatives B, J, BB, LL, and L on Revised Figure 2-1. Alternative J is the proposed alternative. It follows the Denver and Rio Grande Western (D&RGW) Railroad right-of-way for nearly the entire distance between the Horizon Substation and the new substation west of Fruita. Because it is located adjacent to an existing right-of-way and is mostly in an urban setting, the proposed alternative has no significant impacts on land use, or cultural, physical, and biological resources. The main impacts associated with the proposed alternative are visual; it would be seen from U.S. Highway 6 & 50 for most of the distance between Horizon and Fruita, and would also be seen from portions of I-70. In addition, the proposed alternative would be seen from a large number of homes which are located in the Fruita vicinity and along U.S. Highway 6 & 50. Alternative J would cost approximately \$3.1 million to construct.

Alternative B is on a common alignment with the proposed alternative in its western half, but its eastern portion is located along 25 Road and I Road instead of following the D&RGW Railroad. Comparing the proposed alternative to Alternative B reveals that the proposed would have a substantially lower effect on agriculture, require the removal of fewer trees, and would be seen from substantially fewer homes. Specifically, Alternative B would result in locating 41 structures at the edge of cultivated land compared to none for the proposed, would require the removal of 21 additional trees, and would be seen as prominent or evident from 174 additional homes. The only notable disadvantage the proposed alternative has compared to Alternative B is in visual conflicts. This results from the fact that the proposed alternative would be seen from U.S. Highway 6 & 50 over a longer distance than Alternative B. Alternative B would cost approximately \$700,000 less than the proposed.

Alternative BB differs from the proposed alternative over most of its distance. Alternative BB would be located adjacent to an existing PSCC 69-kV line which generally follows the Colorado River. The proposed alternative has several advantages over Alternative BB; these include a lower effect on residential and other

property, the removal of fewer trees, no agricultural conflicts, a lower effect on recreation areas, and a lower effect on biological and physical resources. Alternative BB would result in 0.9 mile through important bald eagle habitat, two crossings of the Colorado River, and four miles of construction through soils with a moderate erosion hazard. Although visual impacts associated with visibility from highways are generally lower, Alternative BB crosses I-70 twice and would be visible from the Colorado River over a distance of 2.4 miles. Alternative BB has a significant advantage over the proposed alternative in visual prominence from homes. Alternative BB would actually be seen prominently from more homes (36 compared to 26 for the proposed alternative), but would be seen as evident by only 52 homes compared to 251 for the proposed. As explained in Appendix B, the term prominent means the transmission line would be seen as a dominant and dissimilar element in the landscape; evident means the line is readily apparent but not dominant in the landscape. Alternative BB is estimated to cost \$3.9 million.

Alternative LL is common for its first half with the proposed alternative, but instead of going through Fruita on the D&RGW Railroad, it stays east and north. The proposed alternative has an advantage over Alternative LL in most of the criteria. The most significant advantages include affecting fewer residences, requiring a much smaller number of transmission structures in cultivated lands, removing fewer trees, and being seen from fewer residences. Specifically, Alternative LL would result in locating 49 structures at the edge of cultivated fields, compared to none for the proposed; would require the removal of 18 additional trees; and would be seen as prominent or evident from 60 additional homes. The only advantage Alternative LL has over the proposed alternative is in visual conflicts. The proposed alternative would be seen from U.S. Highway 6 & 50 for approximately 4.3 more miles than Alternative LL. Alternative LL has an estimated cost of \$4.9 million, or \$1.8 million more than the proposed alternative.

Alternative L is common to the proposed for approximately the first half of its distance along the railroad. It then deviates to the south of Fruita using Links 67 and 69. Alternative L would be an improvement over the proposed alternative in only one criteria: visual prominence from homes. Even though it would affect more homes with prominent views of the line (34 vs. 26 for the proposed), it would affect significantly fewer with evident views (131 vs. 251 for the proposed). Alternative L scored the same for recreation as the proposed and nearly the same for visual conflicts. The only difference in visual conflicts is that the preferred would affect the view from significantly more of I-70 and Highway 6 & 50, while Alternative L would have a skylined pole and cross through a scenic area along the Colorado River.

In all other criteria, the proposed alternative would be better than Alternative L. Of greatest difference are agriculture (12 poles at the edge of fields vs. none), trees removed (15 trees vs. 4), and biological resources (2 river crossings and 1.3 miles through riparian habitat vs. none). The cost of Alternative L would be approximately \$3.5 million.

Grand Junction-Clifton-Colorado Ute Segment

Four primary alternatives were identified for this segment. They are identified as Alternatives A, D, J, and L on Revised Figure 2-1. Alternative A is the proposed alternative. It is located along the D&RGW Railroad for most of the distance between downtown Grand Junction and Clifton. The proposed alternative has no significant impacts on land use or cultural, physical, and biological resources.

Again, the main impacts are visual; the proposed alternative would be seen from approximately 3.3 miles of business I-70 and would be seen from a large number of homes.

Alternative D is generally located along the Colorado River. A comparison of the proposed alternative to Alternative D shows that the proposed alternative has an advantage in the following areas: effects on residential and other property, agricultural lands, visual conflicts, recreation, biological resources, and physical resources. Specifically, Alternative D would result in twice as many structures being located in or at the edge of cultivated fields, would be seen over a distance of 1.6 miles from the Colorado River, and would cross through four open space properties. Alternative D would also require one additional crossing of the Colorado River. The major disadvantage associated with the proposed alternative as compared to Alternative D is the fact that it would be seen as prominent from a larger number of homes. The proposed alternative is estimated to cost approximately \$1.2 million less than Alternative D, \$2.3 million compared to \$3.5 million.

Alternative J is located along C Road, and would be parallel, but on the opposite side of the road, to an existing PSCC 69/115-kV transmission line. The existing line must remain in place to serve distribution needs of Grand Valley Rural Power Lines, Inc., who presently utilize the existing PSCC structures. For operation and maintenance purposes, the 230-kV line and GVRPL's existing distribution line cannot be placed on the same structure since the facilities are independently operated. The proposed alternative has an advantage over Alternative J in seven of the eight criteria. The most significant advantages are a lower effect on residential and other property, agriculture, removal of trees, and biological resources. Alternative J would affect 40 more residences through the acquisition of right-of-way than the proposed alternative, would result in the location of 30 additional structures in or at the edge of cultivated fields, and would require the removal of 40 additional trees. The proposed alternative's major disadvantage as compared to Alternative J is the fact that it would be seen as prominent from more residences. Alternative J is estimated to cost \$5.6 million, or more than \$3.3 million higher than the proposed alternative.

Alternative L would be located on a new alignment that is generally south of the urban and agricultural land uses in the Grand Valley. The proposed alternative has several advantages over Alternative L, the most significant of which are fewer visual conflicts and less effect on biological and physical resources. Alternative L's visual conflicts and biological impacts are associated with its proximity to the Gunnison River over a distance of approximately 3 miles and from five crossings of the river. The Gunnison River is identified as an important scenic area in Mesa County's Land Use and Development Policies and also provides habitat for bald eagles. The proposed alternative also has minor advantages in the residential and other property, agriculture, and residential criteria. The major disadvantage associated with the proposed alternative is that it would be seen from a much larger number of residences. Alternative L is estimated to cost \$4.3 million, or nearly twice the cost of the proposed alternative.

Horizon-Grand Junction Segment

Approximately half of this segment (referred to as the Horizon South line) has been previously approved and is presently under construction, and is not part of this study (see Revised Figure 2-9). The remainder, which was evaluated as part

of this study, would complete the Horizon-Grand Junction Segment by connecting with the Horizon South line near Redlands Substation and continuing into the PSCC Grand Junction Substation.

Only one viable alternative was identified for completion of the connection between the Horizon South line and the Grand Junction Substation. This alternative is located along the alignment of the existing 69-kV transmission line and would replace the existing structures with new structures capable of supporting a 230-kV transmission line. Other viable alternatives are not available because of the dense urban development that has occurred in the area.

Substations

Several alternative locations were investigated for the new substation sites. Sites for the new Fruita Substation were investigated near the Gary Western Refinery. Close proximity to the Gary Western facility is desired because it is the largest load in the area. The proposed location is on the south side of U.S. Highway 6 & 50 and east of 15 Road (extended) adjacent to the Gary Western Refinery. This property is owned by Gary Refining who has approved this location. (Refer to Figure 2-7 in the DEA.)

The location of the proposed Clifton Substation is also shown on Figure 2-7 in the DEA. The proposed site is 0.75 mile south of F Road on the east side of 33 Road. Other sites that were analyzed and the reasons for their rejection are described in Chapter 2 of the DEA.

Chapter I

Purpose and Need

CHAPTER 1 - PURPOSE AND NEED

Page 1-1

Insert the following paragraph under **B. Purpose and Need:**

This environmental assessment has been prepared to assess the impacts of upgrading the existing transmission system and also addresses the impacts associated with amending the Management Framework Plan (MFP) for Roan Creek and Winter Flats, an area which includes the Little Book Cliffs Wild Horse Management Area. The MFP adopted for this area does not provide for the establishment of new rights-of-way. Construction of a portion of the proposed action would require amending the MFP specifically for the right-of-way and construction associated with this project.

Page 1-4

Change Section **2. Relationship of Project to Existing Facilities** to read as follows:

- o Fruita Substation will continue to operate as a 69/13-kV substation served from one of the existing 69-kV lines.
- o The combustion turbine at Fruita Substation will continue to operate as required. This unit is capable of generating approximately 15 MW of power.
- o Redlands, Meridian, Cipolla, and Garfield Substations will be de-energized and taken out of service. All electric equipment will be removed and all structures associated with the electrical equipment will be dismantled and removed. Subsequent dismantling and removal of the structure foundations, buildings, and fences will depend upon the size and location of new customer loads that develop within the respective substation's service areas which may require reconstruction at 230-kV.

Page 1-6

Replace local agencies and authorizing actions at the top of this page with the following:

<u>Local Agencies</u>	<u>Authorizing Actions</u>
Mesa County	Conditional Use Permit
Mesa County	Floodplain Permit
City of Grand Junction	Special Use Permit
City of Fruita	Conditional Use Permit and Variance

Page 1-8

Insert the following after the fifth paragraph:

Public meetings were held at 2:00 and 7:30 p.m. on April 3, 1984, at the BLM Office in Grand Junction to hear comments on the Draft EA. Also, a meeting was held with the Fruita City Council on May 14, 1984, to review the status of the project.

CHAPTER II - ALTERNATIVES INCLUDING THE PROPOSED ACTION

Page 2-2

Replace the first paragraph of section 2. Underground Construction with the following:

Placing a high voltage transmission line underground requires the use of high pressure oil filled pipe in which the three-phase conductors are placed. The pipe must be placed at a depth of three to six feet underground, filled with insulating oil and pressurized. Pumping stations are required to maintain the oil pressure, and shunt reactors may be required to limit the voltage rise.

Page 2-6

Replace the first paragraph of section 1. Comparative Analysis of Alternatives with the following:

As described in Chapter 1, the proposed project consists of the completion of a 230-kV loop around the Grand Valley. For purposes of analysis, organization and presentation of results, it is convenient to subdivide the overall system into distinct segments. Three main segments have been defined: Cameo-Fruita, Horizon-Fruita, and Grand Junction-Clifton-Colorado Ute. Each of these segments is shown in Revised Figure 2-1. In all cases, the proposed action is also the agency preferred.

Page 2-8,

Replace the first two sentences of section 2. Cameo-Fruita Segment with the following:

Seven primary alternatives were defined for the Cameo-Fruita segment. These alternatives are labeled as Alternatives A, F, V, AA, WW, AAA, and CCC.

Page 2-9

Replace the fifth full paragraph with the following:

Once the primary alternatives were selected, the next step was to compare them to each other in order to identify a proposed alternative. Revised Figure A-1 compares the alternative corridors that were evaluated in detail. As shown in the table, no other alternative has a better overall level of compliance with the criteria, and Alternative A was therefore selected as the proposed alternative. The specific factors which contribute to the numerical ratings shown in Revised Figure 2-3 are summarized in Revised Table 2-2. Further comparison of the proposed alternative to the other primary alternatives follows.

CHAPTER 1 - THE HISTORY OF THE UNITED STATES

1.1 The Early Years of the United States

The first European settlers in North America were the Spanish, who arrived in 1492.

The English arrived in 1607, followed by the French in 1608.

The Dutch arrived in 1614, followed by the Swedish in 1636.

The German arrived in 1683, followed by the Irish in 1709.

The Scottish arrived in 1706, followed by the Welsh in 1713.

The American Revolution began in 1775 and ended in 1783.

1.2 The American Revolution

The American Revolution was a war between the thirteen colonies and Great Britain.

The war began in 1775 and ended in 1783.

The war was fought for the right of the colonies to be independent.

The war was fought for the right of the colonies to be free.

The war was fought for the right of the colonies to be equal.

The war was fought for the right of the colonies to be happy.

1.3 The American Revolution

The American Revolution was a war between the thirteen colonies and Great Britain.

The war began in 1775 and ended in 1783.

The war was fought for the right of the colonies to be independent.

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The war was fought for the right of the colonies to be equal.

The war was fought for the right of the colonies to be happy.

Figure 2-1 Revised



Comparison of Primary Alternatives Cameo-Fruita Segment

Revised Figure 2.3

	North A	Middle F	South V	Book Cliffs		North	
				AA	WW	AAA	CCC
Residential & Other Properties	16	29	39	16	16	37	42
Agricultural Lands	101	106	106	101	101	31	8
Removal of Trees	20	170	160	20	20	310	40
Visual Prominence from Homes	335	770	1460	335	335	780	295
Visual Conflicts	211	208	201	222	171	211	221
Recreation Areas	5	5	5	5	5	10	5
Biological Resources	22	26	26	18	28	24	23
Physical Resources	61	48	43	84	79	71	70

Best Compliance

Second Best Compliance

Lower Compliance

Comparison of Primary Alternatives Horizon-Fruita Segment

Revised Figure 2.4

	I Road B	Railroad J	Exist. 69 BB	RR/E. of Fruita LL	RR/S. of Fruita L
Residential & Other Properties	28	20	44	74	34
Agricultural Lands	104	0	5	124	30
Removal of Trees	250	40	150	220	150
Visual Prominence from Homes	2535	1515	620	2455	995
Visual Conflicts	146	202	165	146	205
Recreation Areas	0	0	5	0	0
Biological Resources	8	1	68	8	49
Physical Resources	2	4	27	4	16

Best Compliance

Second Best Compliance

Lower Compliance

Comparison of Primary Alternatives Cameo-Fruita Segment

Revised Figure 2.3

	North A	Middle F	South V	Book Cliffs AA WW		North AAA CCC	
Residential & Other Properties	16	29	39	16	16	37	42
Agricultural Lands	101	106	106	101	101	31	8
Removal of Trees	20	170	160	20	20	310	40
Visual Prominence from Homes	335	770	1460	335	335	780	295
Visual Conflicts	211	208	201	222	171	211	221
Recreation Areas	5	5	5	5	5	10	5
Biological Resources	22	26	26	18	28	24	23
Physical Resources	61	48	43	84	79	71	70

Best Compliance

Second Best Compliance

Lower Compliance

Comparison of Primary Alternatives Horizon-Fruita Segment

Revised Figure 2.4

	I Road B	Railroad J	Exist. 69 BB	RR/E. of Fruita LL	RR/S. of Fruita L
Residential & Other Properties	28	20	44	74	34
Agricultural Lands	104	0	5	124	30
Removal of Trees	250	40	150	220	150
Visual Prominence from Homes	2535	1515	620	2455	995
Visual Conflicts	146	202	165	146	205
Recreation Areas	0	0	5	0	0
Biological Resources	8	1	68	8	49
Physical Resources	2	4	27	4	16

Best Compliance

Second Best Compliance

Lower Compliance

Criteria Occurrence Summary

Cameo-Fruita Segment

Table 2-2 Revised

Criteria	Primary Alternatives						
	A	F	V	AA	WW	AAA	CCC
RESIDENTIAL AND OTHER PROPERTY							
o Number of occupied buildings that would have to be removed	0	0	0	0	0	0	0
o Number of unoccupied buildings (sheds, etc.) that would have to be removed	0	0	0	0	0	0	0
o Number of parcels crossed resulting in potentially significant land use limitations	0	0	0	0	0	0	0
o Number of residences that would be affected by the acquisition of ROW (within 100 feet of the residence)	0	9	15	0	0	0	3
o Miles of transmission line located on private lands and not following an established ROW (railroads, canals, roads, etc.)	3.1	1.9	1.6	3.1	3.1	4.7	7.1
AGRICULTURAL LANDS							
o Number of occurrences of potential conflict with mechanical irrigation systems	0	0	0	0	0	0	0
o Probable number of poles within cultivated land, including orchards	18	0	0	18	18	0	1
o Probable number of poles at the edge of cultivated land, including orchards	4	42	42	4	4	12	1
REMOVAL OF TREES							
o Probable number of trees removed	2	17	16	2	2	31	4
VISUAL PROMINENCE FROM HOMES							
o Number of houses from which the transmission line would be prominent	12	61	102	12	12	42	18
o Number of houses from which the transmission line would be evident	43	32	88	43	43	72	23
VISUAL CONFLICTS							
o Number of poles skylined due to elevated topography and prominently seen from a major viewpoint, such as I-70, residential areas, etc.	0	0	0	1	1	0	1
o Number of poles skylined due to elevated topography but not prominently seen from a major viewpoint	1	1	1	0	0	1	1
o Number of prominent deviations in the alignment	4	2	2	4	4	4	4
o Number of poles located through scenic areas and prominently seen from a major viewpoint	0	0	0	14	0	0	0
o Number of poles located through scenic areas and not seen from a major viewpoint	62	62	62	36	47	62	62
o Number of poles prominently seen from major highways (and not included in other categories)	0	0	0	0	0	0	0
o Number of poles that would be evident from a major highway (and not included in other categories)	0	0	0	0	0	0	0
o Number of poles seen from an open space or undeveloped recreation area	0	7	0	0	0	0	0

Criteria Occurrence Summary Cameo-Fruita Segment

Table 2-2 Revised

Criteria	Primary Alternatives						
	A	F	V	AA	WW	AAA	CCC
RECREATION AREAS							
o Number of crossings through a developed park or recreation area	0	0	0	0	0	0	0
o Number of crossings through a public open space area or undeveloped park	1	1	1	1	1	2	1
BIOLOGICAL RESOURCES							
o Number of miles through riparian habitat	0	0	0	0	0	0	0
o Number of miles through pinyon/juniper habitat	1.4	1.4	1.4	0.9	2.2	1.4	1.4
o Number of miles through agricultural habitat	2.2	7.7	8.4	2.2	2.2	2.8	0.8
o Number of miles paralleling a river	0	0	0	0	0	0	0
o Number of crossings of bald eagle habitat	0	0	0	0	0	0	0
o Number of river crossings	0	0	0	0	0	0	0
o Number of miles through potential black-footed ferret habitat	0.5	0	0	0.7	0.7	0.8	0.8
o Number of miles crossing habitat of sensitive species	0	0	0	0	0	0	0
o Number of miles adjacent to habitat of peregrine falcons	1.1	1.1	1.1	1.1	1.1	1.1	1.1
PHYSICAL RESOURCES							
o Number of miles through areas of landslide potential	0	0	0	0.2	0	0	0
o Number of miles through uncultivated prime or important soils	0.2	0	0	0.2	0.2	0.2	0
o Number of miles through active gravel pits and known gravel deposits	0	0	0	0	0	0	0
o Number of miles through steep, silty mancos shale or soils susceptible to erosion, slump, and creep	9.1	7.9	7.0	12.5	11.9	10.5	10.5
o Number of miles through soils with difficult reclamation potential	2.5	0.7	0.5	3.2	3.2	1.9	2.9
o Number of miles through soils with moderate erosion hazard	6.8	6.7	7.0	9.1	9.6	13.1	10.0

Insert the following after the third paragraph:

Alternative AAA scored better than the proposed in only one of the eight criteria. In agriculture, Alternative AAA would result in 12 poles at the edge of fields compared to the proposed which would result in 18 poles in fields and 4 poles at the edge of fields. In all other criteria, the proposed alternative scored better. The greatest difference occurred in the criteria of trees removed, visual prominence from homes, and physical resources. Alternative AAA would require the cutting of 31 trees versus 2 for the proposed. It would also adversely affect the views from 114 homes versus 55 for the proposed. In addition it would cross several more miles of soils with erosion hazards. Alternative AAA is estimated to cost \$4.3 million, or approximately \$700,000 more than the proposed.

A comparison of Alternative CCC with the proposed shows that the proposed alternative rated generally better on four of the eight criteria: residential and other property, trees removed, visual conflicts, and physical resources. None of these advantages are significantly higher than the proposed except in the criteria of residential and other property. Alternative CCC was penalized for following an established right-of-way across public land a greater distance than the proposed (7.1 miles versus 3.1).

On the other hand, Alternative CCC would do noticeably better on two criteria: agriculture and visual prominence from homes. Alternative CCC would cause 1 pole to be placed in a field and 1 pole at the edge of a field, while the proposed alternative would result in 18 poles in fields and 4 poles at the edge of fields. In addition, Alternative CCC would adversely affect the views from fewer homes (41 versus 55 for the proposed). The two alternatives are nearly equal in their effects on recreation and biological resources.

Alternative CCC is estimated to cost \$4.0 million, or approximately \$400,000 more than the preferred.

Pages 2-11 through 2-13

Replace Section 3, Horizon-Fruita Segment, with the following:

3. Horizon-Fruita Segment

Five primary alternatives were selected to represent the basic routing strategies defined for the Horizon-Fruita Segment, as shown in Revised Figure 2-1. Alternative J is a railroad route, Alternative BB is a route parallel to an existing PSCC 69-kV line which is generally located on the bluffs above the Colorado River, Alternative B is a route which would replace an existing PSCC 69-kV line along I Road, and Alternatives L and LL are variations of the railroad route which would avoid going through the city of Fruita by staying generally south or north of the city limits, respectively.

The basis for selecting these primary alternatives is shown in Figure A-2 in Appendix A of the DEA. As shown in Figure A-2, fourteen of these alternatives are included in the I Road basic routing strategy. Alternative B has the lowest rank order of these alternatives, and therefore was selected as the primary alternative to represent the I Road basic routing strategy.

The railroad basic routing strategy includes six alternatives; Alternative J was selected to represent this strategy because it has the lowest rank order. Alternative L was also chosen as a variation which would utilize a major portion of the railroad but avoid the city of Fruita by crossing the Colorado River just south of the city.

The existing 69-kV basic routing strategy includes five alternatives; Alternative BB minimized visibility to I-70 and U.S. 6 & 50 overall and was therefore chosen as a primary alternative.

Nine alternatives are included within the East of Fruita basic routing strategy; Alternative LL was selected as a primary alternative.

Revised Figure 2-4 compares the five primary alternatives. Alternative J was selected as the proposed alternative because it has the best overall level of compliance with the route evaluation criteria, as evidenced by achieving a best or next best level of compliance with six of the eight criteria. The specific factors which contribute to the numerical ratings shown in Revised Figure 2-4 are summarized in Revised Table 2-3.

Comparing the proposed alternative to Alternative B reveals that it would have a substantially lower effect on agriculture, require the removal of fewer trees, and would be seen from substantially fewer homes. The proposed alternative also has slight advantages in the residential and other property and biological resources, and the same or nearly the same rating in recreation areas and physical resources. The only disadvantage Alternative J has compared to Alternative B is in the visual conflicts criterion. This results from the fact that the proposed alternative would be seen from U.S. Highway 6 & 50 over a longer distance than Alternative B. The proposed alternative has a similar estimated cost as Alternative B, \$3.1 million for the proposed compared to \$3.2 for Alternative B.

The proposed alternative has several significant advantages over Alternative BB; these include a lower effect on residential and other property, the removal of fewer trees, less agricultural conflicts, a lower effect on recreation areas, and a lower effect on biological and physical resources. Alternative BB would result in lower visual conflicts and affect the views from fewer homes. Alternative BB is estimated to cost approximately \$3.9 million, or approximately \$800,000 more than the proposed.

The proposed alternative has an advantage over Alternative LL in most criteria. The most significant advantages include affecting fewer residences, requiring a much smaller number of transmission structures in cultivated lands, removing fewer trees, and being seen from fewer residences. The only advantage Alternative LL has over the proposed alternative is in visual conflicts. The proposed alternative would be seen from U.S. Highway 6 & 50 in approximately 4.3 more miles than Alternative LL. Alternative LL has an estimated cost of \$4.9 million, or \$1.8 million more than the proposed alternative.

Criteria Occurrence Summary
Horizon-Fruita Segment
Table 2-3 Revised

Criteria	Primary Alternatives				
	B	J	BB	LL	L
RESIDENTIAL AND OTHER PROPERTY					
o Number of occupied buildings that would have to be removed	0	0	0	0	0
o Number of unoccupied buildings (sheds, etc.) that would have to be removed	0	0	0	0	0
o Number of parcels crossed resulting in potentially significant land use limitations	2	1	2	1	2
o Number of residences that would be affected by the acquisition of ROW (within 100 feet of the residence)	9	5	5	21	6
o Miles of transmission line located on private lands and not following an established ROW (railroads, canals, roads, etc.)	0	1	4.6	5.1	2.3
AGRICULTURAL LANDS					
o Number of occurrences of potential conflict with mechanical irrigation systems	0	0	0	0	0
o Probable number of poles within cultivated land, including orchards	0	0	0	0	0
o Probable number of poles at the edge of cultivated land, including orchards	41	0	2	49	12
REMOVAL OF TREES					
o Probable number of trees removed	25	4	15	22	15
VISUAL PROMINENCE FROM HOMES					
o Number of houses from which the transmission line would be prominent	56	26	36	154	34
o Number of houses from which the transmission line would be evident	395	251	52	183	131
VISUAL CONFLICTS					
o Number of poles skylined due to elevated topography and prominently seen from a major viewpoint, such as I-70, residential areas, etc.	0	0	1	0	1
o Number of poles skylined due to elevated topography but not prominently seen from a major viewpoint	0	0	0	0	0
o Number of prominent deviations in the alignment	1	0	4	4	2
o Number of poles located through scenic areas and prominently seen from a major viewpoint	0	0	14	0	9
o Number of poles located through scenic areas and not seen from a major viewpoint	0	0	15	0	0
o Number of poles prominently seen from major highways (and not included in other categories)	24	44	2	28	35
o Number of poles that would be evident from a major highway (and not included in other categories)	43	46	0	27	17
o Number of poles seen from an open space or undeveloped recreation area	3	0	0	0	0

Criteria Occurrence Summary

Horizon-Fruita Segment

Table 2-3 Revised

Criteria	Primary Alternatives				
	B	J	BB	LL	L'
RECREATION AREAS					
o Number of crossings through a developed park or recreation area	0	0	0	0	0
o Number of crossings through a public open space area or undeveloped park	0	0	1	0	0
BIOLOGICAL RESOURCES					
o Number of miles through riparian habitat	0	0	1.2	0	1.3
o Number of miles through pinyon/juniper habitat	0	0	0	0	0
o Number of miles through agricultural habitat	0.3	1.2	1.2	0.6	3
o Number of miles paralleling a river	0	0	0.8	0	0.6
o Number of crossings of bald eagle habitat	0	0	2.1	0	0.7
o Number of river crossings	0	0	2	0	2
o Number of miles through potential black-footed ferret habitat	0	0	0	0	0
o Number of miles crossing habitat of sensitive species	0	0	0	0	0
o Number of miles adjacent to habitat of peregrine falcons	0	0	0	0	0
PHYSICAL RESOURCES					
o Number of miles through areas of landslide potential	0	0	0	0	0
o Number of miles through uncultivated prime or important soils	0.1	0.5	1.3	0.5	1.3
o Number of miles through active gravel pits and known gravel deposits	0	0	1.4	0	0.7
o Number of miles through steep, silty mancos shale or soils susceptible to erosion, slump, and creep	0	0	0	0	0
o Number of miles through soils with difficult reclamation potential	0	0	0.9	0	0
o Number of miles through soils with moderate erosion hazard	0.9	0.2	4.4	0.7	1.8

Alternative L has one distinct advantage over the proposed alternative. This is in the category of visual prominence from homes. The proposed alternative would be visually prominent to 26 homes and visually evident to 251 homes, while Alternative L would be prominent to 34 homes and evident to 131 homes. Alternative L would therefore affect 112 fewer homes. These two alternatives would have the same effect on recreation and nearly the same effect in visual conflicts. In visual conflicts there is a tradeoff: the proposed alternative would affect the views over a longer distance of I-70 and U.S. Highway 6 & 50 than Alternative L, but Alternative L would have a skylined pole and cross a scenic area along the Colorado River which the proposed alternative would not. In each of the remaining five criteria, the proposed alternative would have an advantage over Alternative L. The estimated cost of Alternative L would be \$3.5 million.

Refer to Revised Table 2-3 and the detailed description of the route evaluation criteria in Appendix B of the DEA for more information.

Page 2-15

Replace the paragraph under section **b. Corridor Level Alternatives** with the following:

The following discussion pertains to routing opportunities that were considered early in the study process or were re-analyzed or considered after comments were received on the DEA. Although they are shown on Revised Figure 2-6 as specific corridors, they should be considered representative of numerous configurations that were investigated to make a desired connection.

Page 2-16

Replace **Alternatives 101 and 102** with the following:

Alternatives 101 and 102 -- These alternatives were an attempt to develop a southern route out of Cameo to avoid the Book Cliffs. Numerous variations of the routes shown on Revised Figure 2-6 were explored, but had significant limitations. Of primary concern was the high visibility of portions of these alternatives in DeBeque Canyon as seen from I-70 and the outlying Palisade area. This area is rated 'A' (highest) scenic quality by BLM and is considered to be visually sensitive. In addition, these alternatives would involve from two to four crossings of the Colorado River which would be a biological, as well as visual and engineering concern.

Specific biological impacts would accrue from a variety of factors identified as highly important (weighted 10.0). These include: crossing riparian habitat, paralleling a river and crossing a river. Attempts were made to avoid or minimize contact with riparian habitat throughout the siting study due to its high value. More important than the potential construction impacts, however, is the long-term impacts of waterfowl collision with the line throughout the life of the project. Conversely, the biological impacts in the Book Cliffs from both construction and operation are expected to be minimal due to the mitigation measures committed to by PSCC. These include a no construction period from December 1 to July 31 to avoid critical periods for wild horses and various wildlife species. In addition, helicopter construction will be utilized wherever there is insufficient existing access (see Table 2-9 in the DEA).

Agricultural impacts and visual prominence from homes would have been very high with a southern loop alternative which would have crossed approximately six miles of agricultural land and residential development. The Book Cliff alternatives would affect neither homes nor agriculture. For these reasons, all variations of this alternative were dropped from further consideration, including the potential of utilizing both corridors as a connection to the network of proposed alternatives (see Revised Figure 2-6) in the Clifton vicinity. It would be possible to eliminate the northern alternative through the Book Cliffs by constructing a loop entirely south of I-70, using, for example, Alternatives A and J, as shown on Revised Figure 2-6. This alternative was rejected, however, because of the much greater impacts on existing land use and visual prominence associated with constructing through the developed portion of the Grand Valley between Palisade and Grand Junction, as compared to an alternative located on undeveloped land north of I-70.

Page 2-18

Insert the following:

Alternative 119 -- Variations of an alternative were developed to provide a connection from the Cameo Power Plant to the new Fruita Substation utilizing the existing corridor down I Road. This alternative was evaluated in detail before it was determined to be in violation of FAA regulations because of conflicts with flight patterns of the Walker Field expansion. Isbill Associates Inc., who is the consultant to Walker Field, indicated conflicts with the Walker Field expansion airspace which necessitated realignment or rejection of these and other alternatives in letters to EDAW inc. on October 14, 1983 and May 7, 1984. The alignment for Alternative 119 as shown on Revised Figure 2-6 represents the westernmost variation considered. Moving the alternative further to the west to avoid the airport approach zone creates increased conflict with the agricultural and residential land uses within the developed central portion of the Grand Valley. The alignment shown on Revised Figure 2-6 which avoids these developed lands in getting to I Road still proved to be no improvement to the proposed alternative. In fact, of the eight evaluation criteria, the I Road alternative would score more favorably than the preferred on only one, biological resources. It would score virtually the same on two: recreation and agriculture. The remaining five criteria would all score worse than the proposed alternative. These include: residential and other property, removal of trees, visual prominence from homes, visual conflicts, and physical resources. Of these, visual prominence from homes would be the most adversely affected. The proposed alternative (Alternative A) would adversely affect the views from a total of 55 homes while the I Road alternative would adversely affect the views from 388 homes.

Alternative 120 -- This route was considered as an option to the proposed alternative for the Cameo-Fruita segment. Between the draft and final EA, several alternatives were developed and evaluated as a means of reducing agricultural impacts. Alternative 120 was developed along I8 Road between P 1/2 Road (extended) and Link 19. It was determined, however, that this route could not be constructed without removing one or more existing residences. This type of impact was judged to be unacceptable and the alternative was therefore dropped from further consideration.

Page 2-21

Replace Section **1, Description of the Proposed Action**, with the following:

The proposed action is shown in Revised Figure 2-8. As noted earlier, construction of the proposed action will result in the completion of a 230-kV loop to serve the Grand Junction area. Also included as part of the proposed action are the construction of two new substations, rebuilding the existing Grand Junction Substation, and adding equipment at two existing substations. The location of all these actions is shown in Revised Figure 2-8. A schedule of the proposed acquisition and construction related tasks described in the following sections of this chapter are shown on Revised Table 2-5, Construction Schedule.

Page 2-22

Replace the third paragraph with the following:

Revised Figure 2-9 shows scale illustrations for each structure that may be used. The types of structures that are most likely to be used for each segment are shown in Revised Figure 2-10.

Table 2-6

Replace Table 2-6 with Revised Table 2-6 following.

Page 2-24

Replace the first paragraph of section (4) Access, with the following:

Once a final corridor and final alignment within the corridor is established, an access plan will be prepared to meet the requirements of Section 2803, Appendix 2, page 1 of the BLM Manual. This access plan will be prepared by PSCC, with the coordination of the BLM, and will identify specific access and construction techniques (i.e., conventional or helicopter) to be used at each structure site and along the length of the right-of-way. PSCC will not construct any new roads or trails or improve any existing roads or trails within the Book Cliffs. Where present access is not sufficient in the Book Cliffs, PSCC will construct by helicopter.

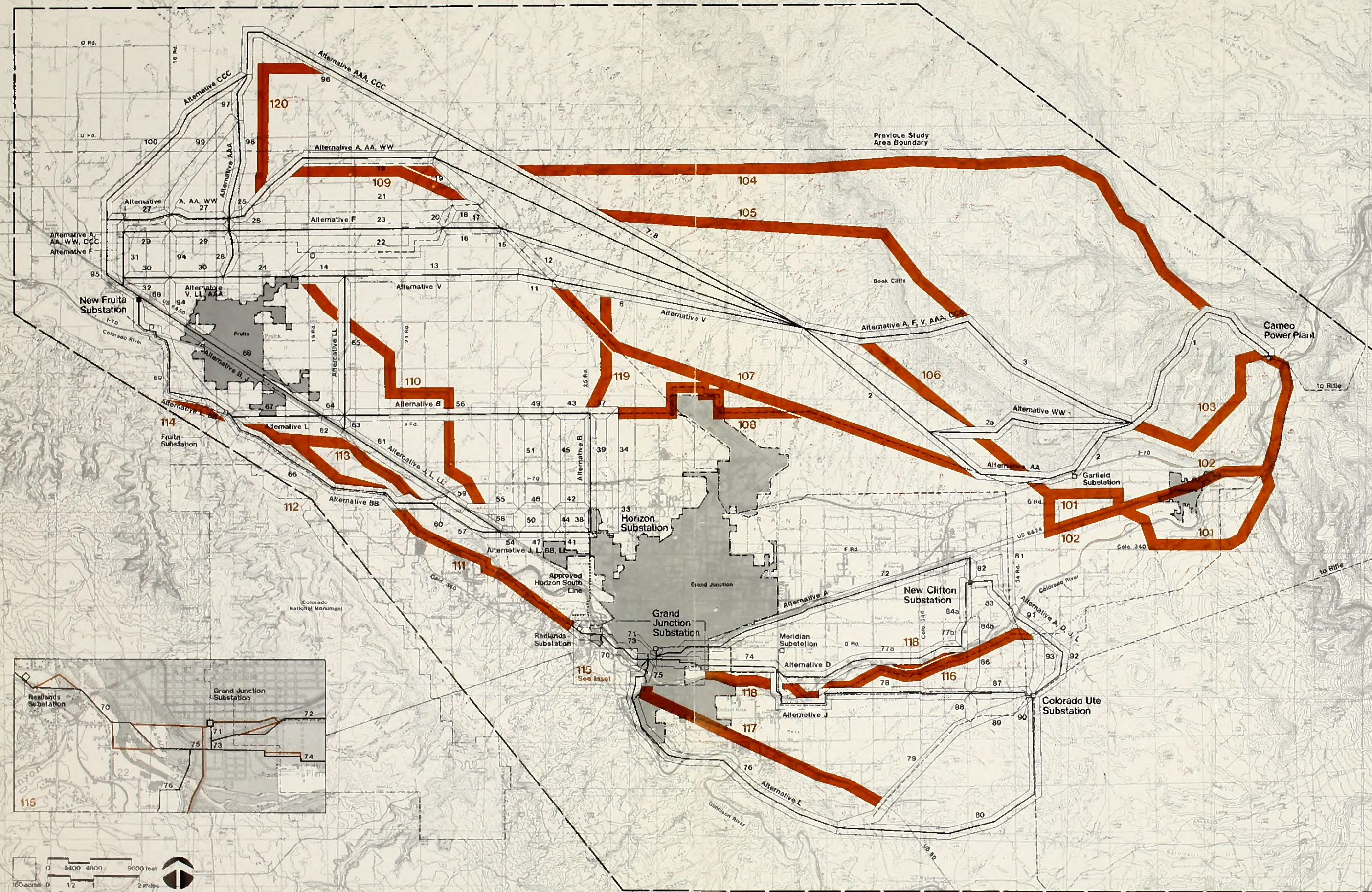
Page 2-27

Replace Section **e, Utilization of Existing 69-kV Lines**, with the following:

Certain segments of the existing 69-kV line are proposed to be abandoned, used for distribution, or remain in service. (See Revised Figure 2-11 and Revised Table 2-5). The portions which are to be abandoned will be dismantled, removed from the right-of-way, and the disturbed areas revegetated, using the same seed mixtures as shown for the new transmission lines. (See Tables 2-10 and 2-11 in the DEA).

Alternative Transmission Line Corridors Considered But Rejected

Figure 2-6 Revised



Grand Junction Conversion Transmission Line Siting Study

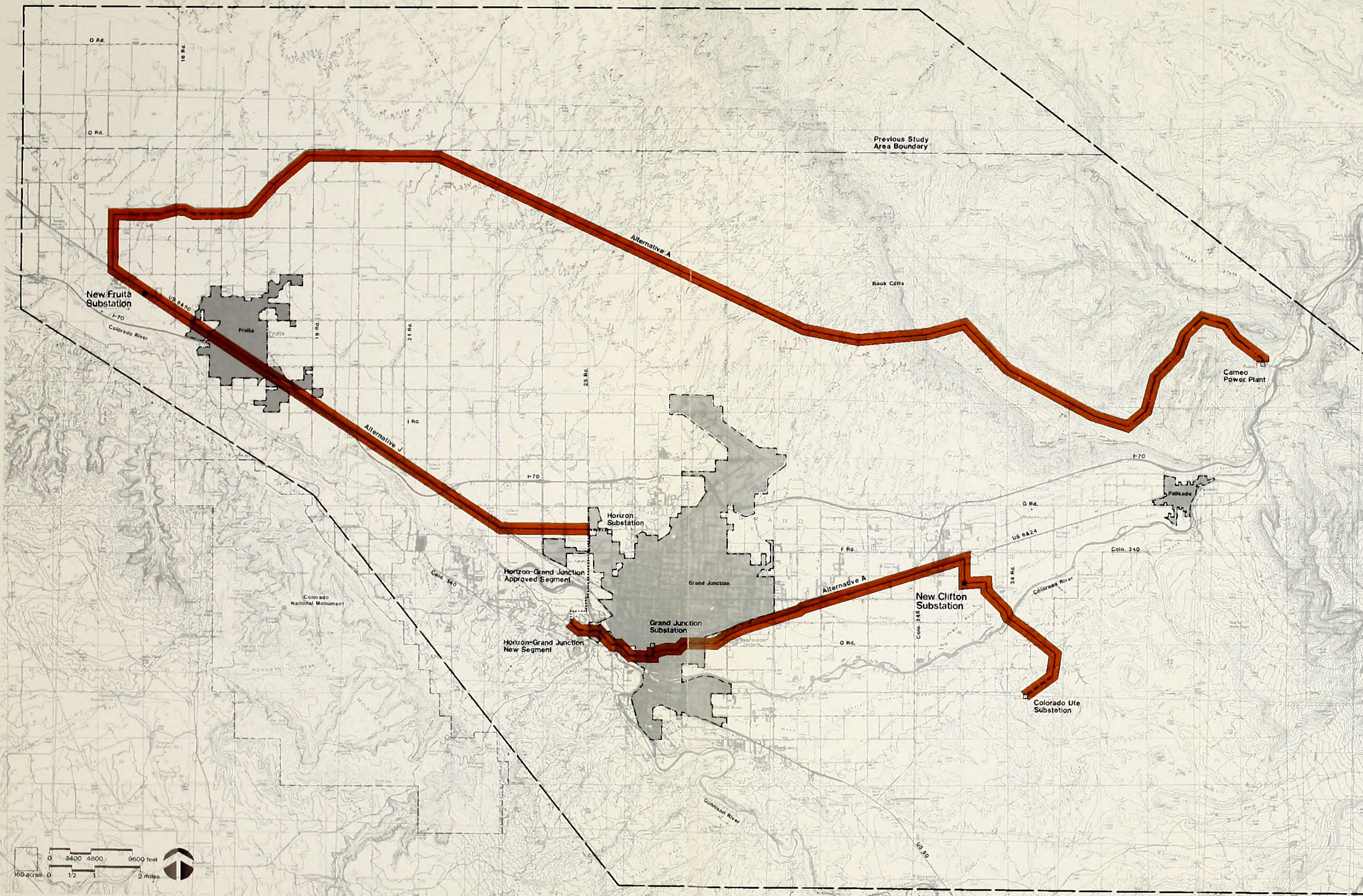
Public Service Company of Colorado

EDAW Inc.

The Proposed Action

Figure 2-8 Revised

- Proposed Alternative
Quarter mile study corridor with preliminary alignment
for new 230kv line
- Existing 69kv line to be removed and replaced with
new 230kv line
- New 230kv line to be constructed parallel to existing
transmission line

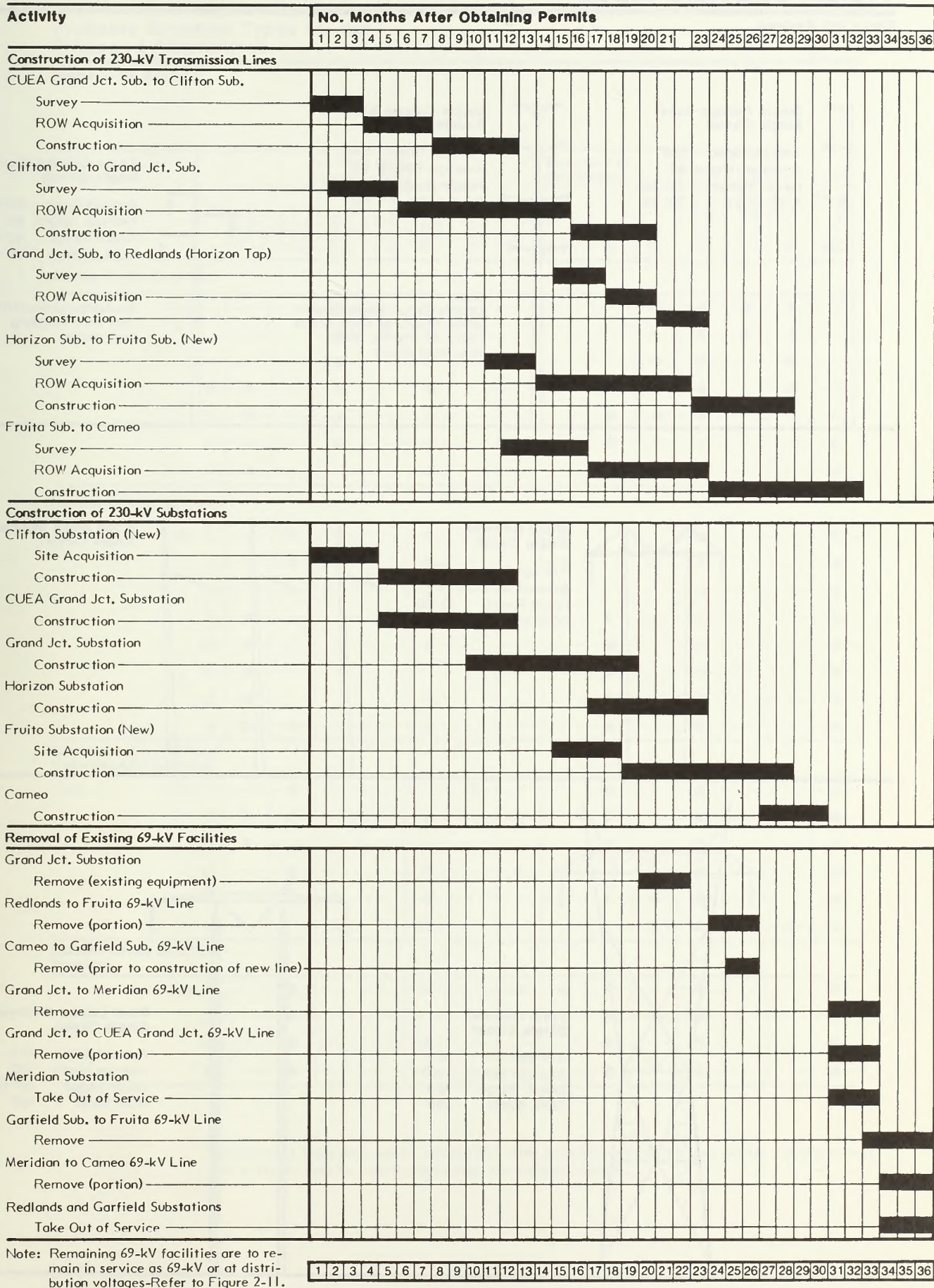


Grand Junction Conversion Transmission Line Siting Study

Public Service Company
of Colorado

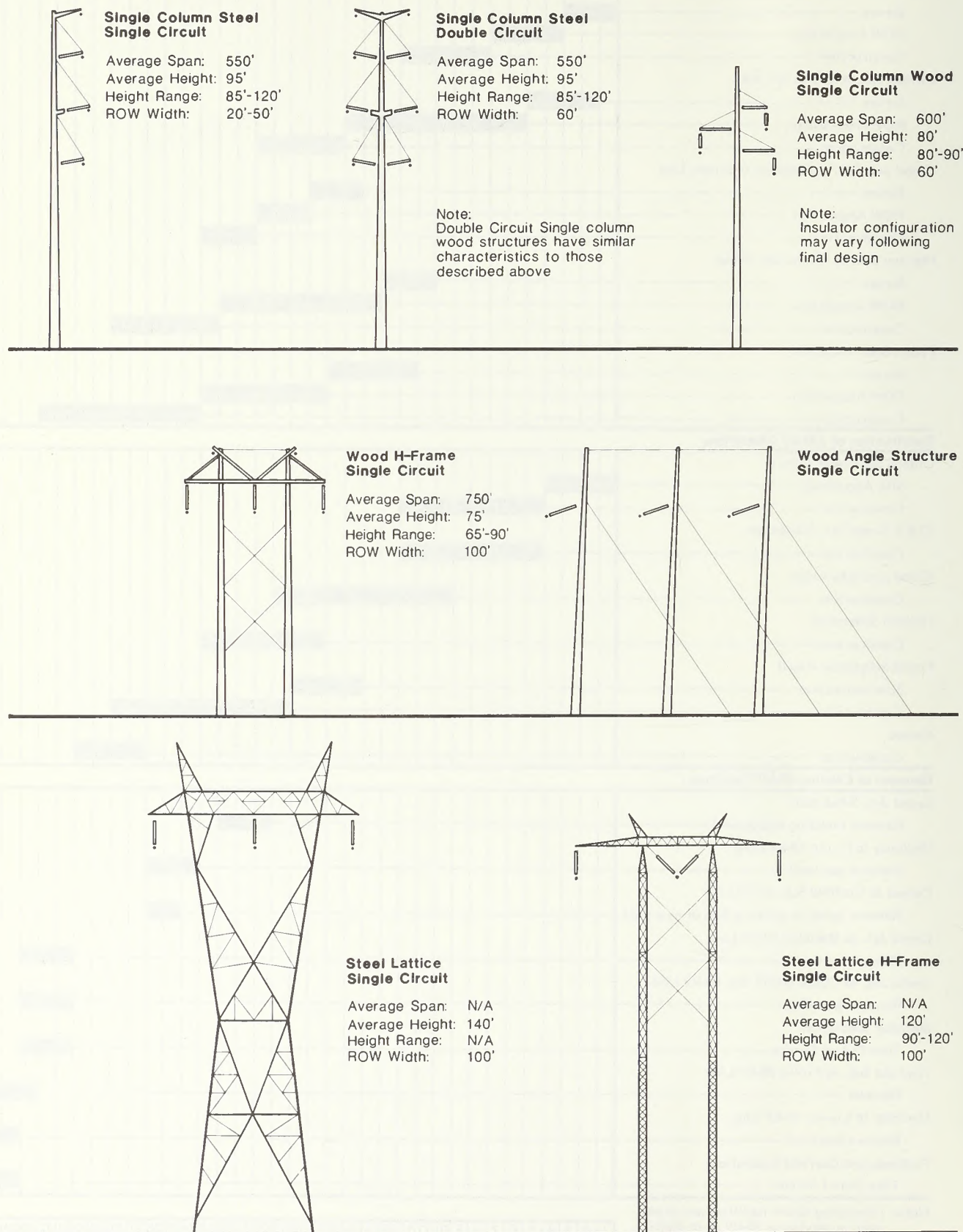
EDAW inc.

Construction Schedule
Table 2-5 Revised



Typical Structure Types

Figure 2-9 Revised



Probable Structure Types for the Proposed Alternatives

Figure 2-10 Revised

		Structure Design Characteristics						Right-of-Way Requirements				Conventional Construction	Helicopter * Construction	BLM Land	Private Land	
		Single Column Wood	Single Column Steel	Wood H-Frame	Steel H-Frame	Single Circuit	Double Circuit	20'	50'	60'	100'					
Cameo-Fruta Segment																
Route A	Links 1			●		●					●	●	●	●		
	3			●	●	●					●	●	●	●		
	7/8			●		●					●	●		●		
	19	●		●		●				●	●	●		●		●
	25	●		●		●				●	●	●				●
	27	●		●		●				●	●	●				●
	95	●				●				●		●				●
	Horizon-Fruta Segment															
Route J	Links 41		●			●			●			●				●
	47		●			●			●			●				●
	54		●			●			●			●				●
	58	●								●		●				●
	59	●				●				●		●				●
	61	●								●		●				●
	62	●				●				●		●				●
	68	●	●			●				●		●				●
Grand Junction-Clifton-Colorado Ute Segment																
Route A	Links 71		●				●			●		●				●
	72	●	●			●		●		●		●				●
	82	●								●		●				●
	83		●			●		●				●				●
	91			●		●					●	●				●
	92			●		●					●	●		●		●
	Horizon-Grand Junction Segment															
	Links 70		●			●		●	●	●		●				●
	71		●				●			●		●				●
	73		●			●				●		●				●
	75		●			●				●		●				●

* Portions of these links will be constructed using helicopters; other portions (where existing access is available) may be constructed using conventional methods.

TABLE 2-6 REVISED

STRUCTURE TYPE

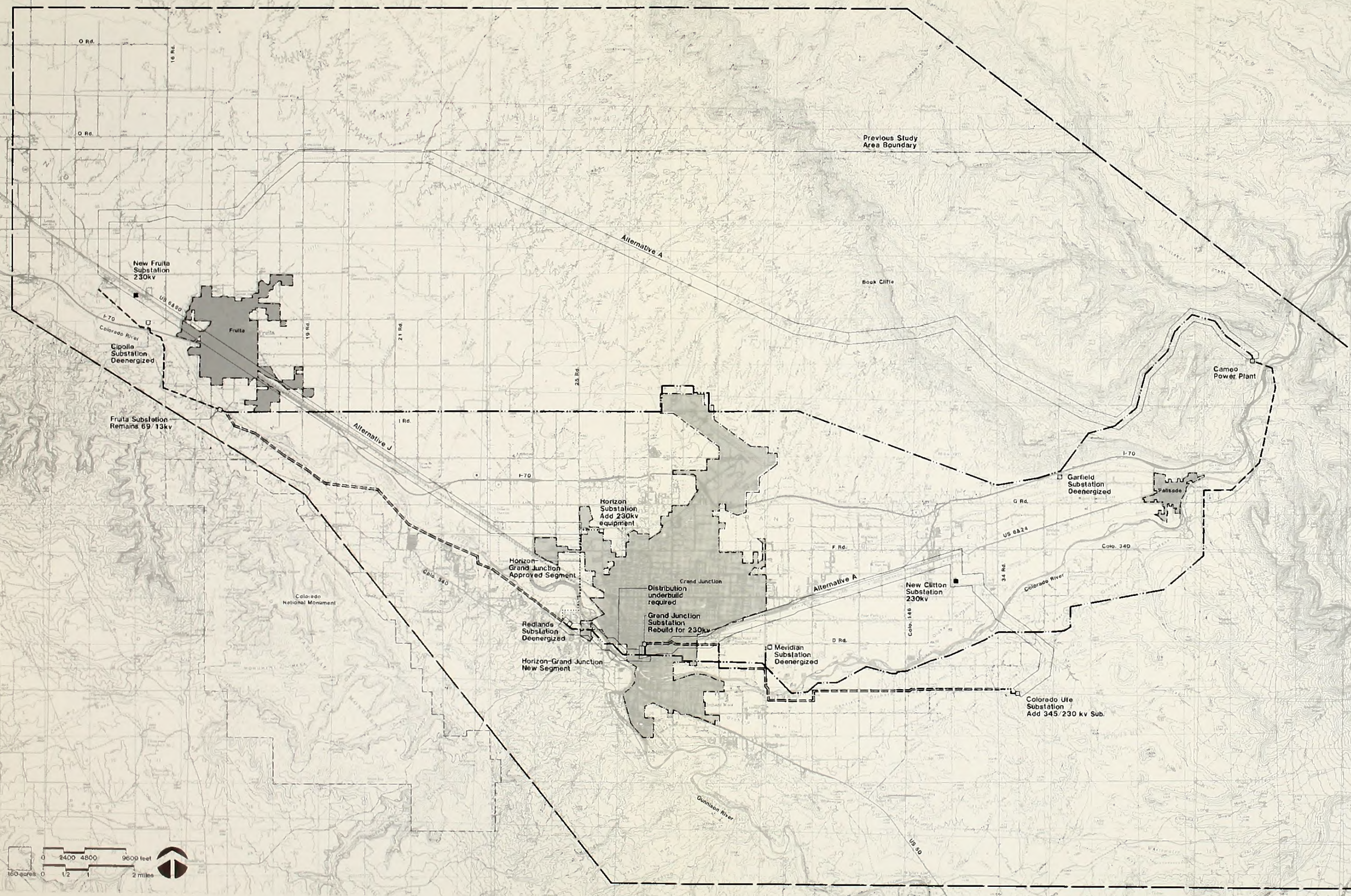
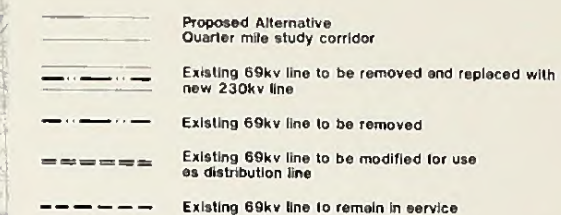
Description	Single Circuit				Double Circuit
	Single Column Wood	Single Column Steel	Wood H-Frame	Lattice Steel H-Frame	Single Column Steel
Voltage: Initial Operation	230 kV	230 kV	230 kV	230 kV	230 kV
Voltage: Possible Ultimate Operation	230 kV	230 kV	230 kV	230 kV	230 kV
ROW Width	60'	20'-50'	100'	100'	60'
Span Between Structures: Average	600'	550'	750'	N/A*	550'
Span Between Structures: Typical Maximum	650'	900'	1000'	N/A*	900'
No. of Structures Per Miles (average span)	8-9	9-10	7	N/A*	9-10
Height of Structures: Average	80'	95'	75'	120'	95'
Height of Structures: Typical Range	80'-90'	85'-120'	65'-90'	90'-120'	85'-120'
Structure Base Area	7 sq. ft.	20 sq. ft.	78 sq. ft.	78 sq. ft.	20 sq. ft.
Land Disturbed at Structure Base	900 sq. ft.	900 sq. ft.	2500 sq. ft.	900 sq. ft. ^(h) 2500 sq. ft.	900 sq. ft.
Minimum Ground Clearance Beneath Conductor	34'	34'	34'	34'	34'
Minimum Ground Clearance Beneath Conductor Over Cultivated Land	34'	34'	34'	34'	34'
Circuit Configuration	Staggered Vertical	Vertical	Horizontal	Horizontal	Vertical
Conductor Type & Size (Cir. Mils in Inches)	ACSR** 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"

* Lattice steel H-Frame structures would only be used in limited locations; spans will vary to meet specific requirements.

** ACSR - Aluminum conductor, steel reinforced

(h) Helicopter construction

Figure 2-11 Revised



Insert the following:

5. Measures for Species of Special Concern

Federally designated threatened and endangered plant and animal species were considered as a topic of special importance due to their high sensitivity and legally protected status. Specific steps were taken in the project design to preclude, to the degree possible, any adverse effect on these species as well as other species of special concern or management status. Table 2-12 includes a list of measures for species of special concern. These are separated from the table of mitigation measures (Table 2-9) because of the technical distinction made in the Endangered Species Act between mitigation of impacts and elimination of impacts.

TABLE 2-12

MEASURES FOR SPECIES OF SPECIAL CONCERN

1. PSCC will observe a no construction period within, and across the face of, the Book Cliffs from December 1 through July 31 in order to avoid disturbance to wild horses and peregrine falcons during critical winter and spring periods.
2. No new access will be created in the Book Cliffs. Existing roads will be used where adequate but will not be improved or upgraded. Where existing access is insufficient, construction and routine patrol will be done by helicopter.
3. The transmission line conductors will be placed in a horizontal configuration and the static wire will be marked at all locations where river crossing is required.
4. If, in the future, ferrets are verified to be within 0.25 mile of any of the PSCC 230-kV transmission rights-of-way, PSCC will retrofit the towers with adaptors that will prevent raptors from using them for perches. A survey of the final approved alignments will be made for black-footed ferrets prior to construction.
5. A survey for Uinta Basin Hookless Cactus will be conducted between the Colorado River and the Colorado Ute Substation prior to construction of Alternative A of the Grand Junction-Clifton-Colorado Ute Segment. A specific alignment will then be developed which avoids disturbance to all individuals.
6. No equipment or structures will be placed in the river on a permanent or temporary basis where river crossings are required. All operations will remain away from the river's edge to avoid silting. No waste or debris will be disposed of in the river. These measures are designed, in part, to ensure endangered fish species are not affected by this project.

Table 2-9, Page 3 of 5

Insert the following in Mitigation Measure Number 13:

Construction of new roads will be minimized by utilizing existing roads and trails whenever possible.

Table 2-9, Page 4 of 5

Replace Mitigation Measure Number 19 with the following:

19. Burning or burying of waste materials on the ROW or at the construction site will not be allowed. The contractor shall remove all waste materials from the construction area. All materials resulting from the contractor's operations shall be removed from the ROW.

Table 2-9, Page 4 of 5

Insert the following in Mitigation Measure Number 22:

No construction equipment will be allowed in the river, and disturbance to all stream banks will be avoided.

Table 2-9, Page 5 of 5

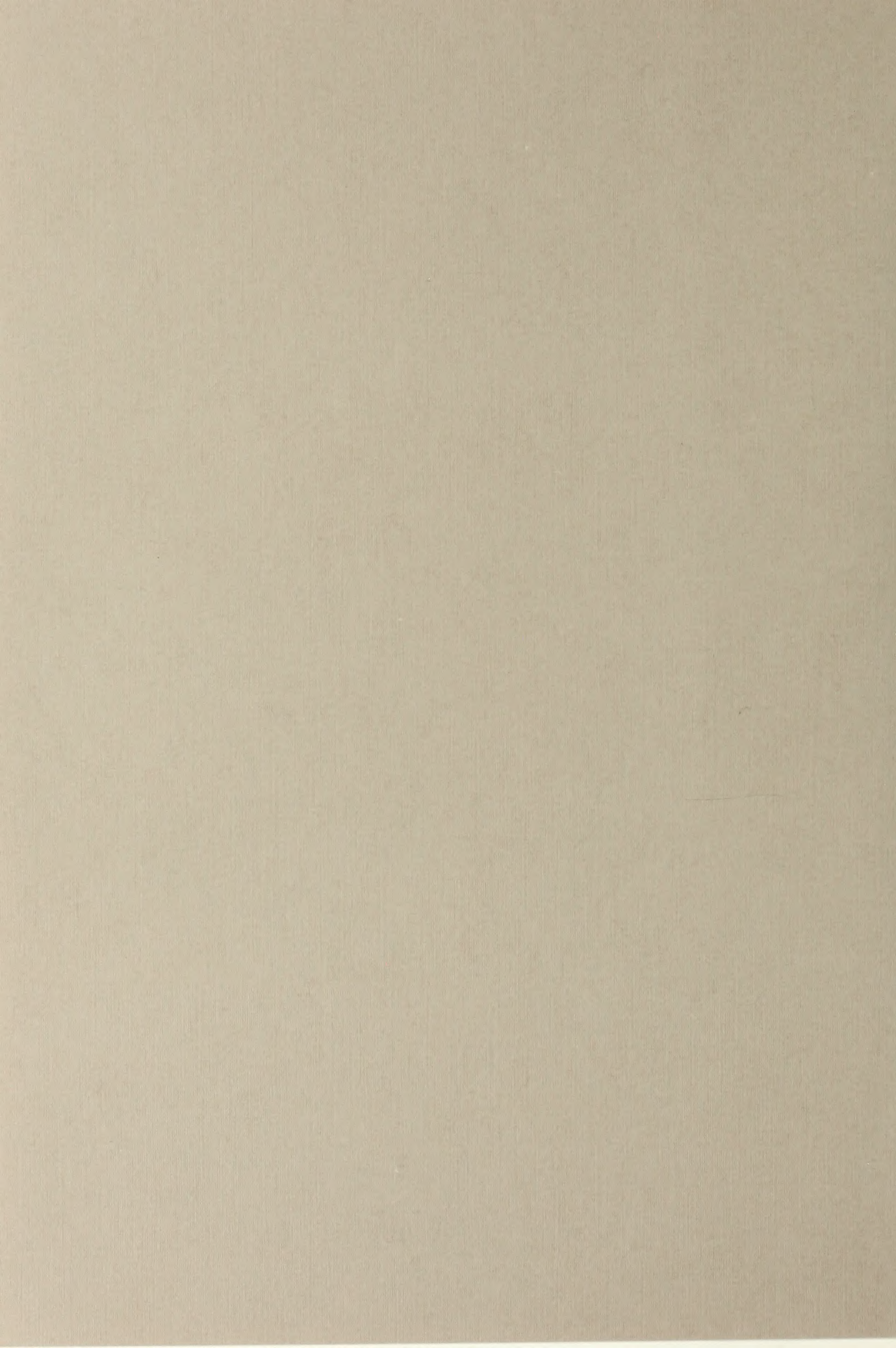
Delete Mitigation Measure Number 27.

Tables 2-10 and 2-11

Change the variety name of Indian Ricegrass from "Nezpar" to "Paloma".

Chapter III

Affected Environment



CHAPTER III - AFFECTED ENVIRONMENT

Page 3-7

Delete the first full paragraph on this page.

Page 3-8

Replace the second paragraph with the following:

Prevalent birds in pinyon/juniper are raptors such as American kestrels and long-eared owls, chukar, and a variety of small birds.

Page 3-8

Last paragraph on the page. Replace the last two sentences with the following:

No confirmed black-footed ferret sightings have been reported in the immediate project vicinity, but confirmed sightings and other observations have been reported further to the west, near the Colorado-Utah line. (Personal communication Bob Kline, BLM, 1983). Known locations of prairie dogs are widespread as shown on Figure 3-4 in the DEA.

Page 3-9

Delete the last three paragraphs and replace with the following:

3. Species of Special Concern

Plants listed by the federal government as threatened and endangered, and species considered by the State of Colorado as sensitive occur within the study area. Known locations of such plants are shown on Figure 3-4 in the DEA. Spineless hedgehog cactus (Echinocereus triglochidiatus var. inermis), a federally endangered plant, has been discovered in a few localities in the southeastern portion of the study area. Likewise, the Uinta Basin hookless cactus (Sclerocactus glaucus), a federally threatened plant, occurs in a few places on dry, alkaline, saltbush-covered hillsides in the southeastern portion of the study area. Two plants under review for threatened/endangered status, Cryptantha elata and Astragalus linifolius, have been identified in at least one location in the study area. Plants of state concern present in the area include Lomatium eastwoodae, Gilia stenothyrsa, Enceliopsis nutans, and Mentzelia thompsonii.

The study area also contains wildlife species of special concern. Designated threatened and endangered wildlife species in or near the study area include the peregrine falcon, which has an historic nesting area in the Book Cliffs (although not active in the past few years); and the bald eagle which winters along the Colorado and Gunnison Rivers. Two additional designated species may occur in the study area. The first is the black-footed ferret which is of doubtful occurrence in the study area, but may occur in other portions of the Grand Valley. The second is the whooping crane which is known to fly over the study area. However, there are no known stopover points on their migratory route within the study area proper, though a few sandhill cranes rest and feed along the river and in the agricultural lands during migration (Lambeth, BLM, 1984, personal communication).

Four endangered fish species potentially occur in the study area in the Colorado River. These include the bonytail chub (federal endangered), humpback chub (federal endangered), Colorado squawfish (federal endangered), and the razorback sucker (state endangered).

Several additional species are currently under review for federal threatened and endangered status. They include the mountain plover, rare migrant; the western snowy plover, and the long-billed curlew, scarce to uncommon migrant; the white-faced ibis, regular migrant feeding in agricultural lands and reservoirs; ferruginous hawk and Swainson's hawk, scarce breeders in the Grand Valley but outside the study area; the western yellow-billed cuckoo, scarce breeder in the riparian cottonwoods; the razorback sucker, rare and localized in the Colorado and possibly Gunnison Rivers.

Wild horses are present in the Book Cliffs, and since 1974 a herd has been managed by the BLM in the Little Book Cliffs Wild Horse Area (see Figure 3-6 in the DEA). This special management area is one of three in the United States and was established in 1980 under a Bureau-wide program for the management and protection of wild, free-roaming horses and burros. The Little Book Cliffs Wild Horse Area includes approximately 27,700 acres of fenced pinyon-juniper, sagebrush, and saltbush vegetation types which support approximately 110-120 head in 15 separate bands (1977 figures). Periodic reductions are necessary to maintain the herd at a level which is in balance with the forage produced in the area.

Winter range is of particular importance to the health of the herd. A portion of the study area (Coal Canyon) is included in the Wild Horse winter range. Vegetation in this area is not utilized during the summer months due to a lack of reliable water, but may be utilized heavily during the winter months (December to April). Another important period for the wild horses comes during the foaling period, which occurs from about March 1 through June 1.

An active public education program regarding the wild horse area is in place, and the public is encouraged to visit this area. Most of the area, however, is roadless, and the few roads in the area are closed during critical time periods in order to prevent harassment and preserve the remote, natural character of the area.

Page 3-14

Section E. **CULTURAL RESOURCES**, insert the following introductory paragraph:

All cultural resource information described in this environmental assessment is based upon a Class I survey (existing literature). A comprehensive ground truthing effort has not been conducted at this stage of the study. A Class III (field) survey will be conducted along all final routes before construction.

Page 3-19

Replace the last sentence in the second paragraph with the following:

Mesa County manages several open space parcels, particularly along the Colorado River, and the State of Colorado administers the Walker Wildlife Area which has diverse scenic and recreation values in a rapidly urbanizing area.

Insert the following as the last paragraph on this page:

Revised Figure 3-8 identifies key viewpoints with respect to the proposed project from which a series of twelve visual simulations were prepared. These visual simulations showing before and after views of the transmission line appear in Chapter 4 (Figures 4-1 through 4-12).

Section G. SOCIOECONOMICS, replace the first paragraph in this section with the following:

Grand Junction and the surrounding areas have grown rapidly over the past 10 years. Population statistics for Grand Junction, Fruita, unincorporated areas, and other communities within Mesa County are given in Revised Table 3-3.

REVISED TABLE 3-3
POPULATION IN MESA COUNTY, 1970-1983

	Pop. 1970 Census ^a	Pop. 1977 Census ^b	Average Annual Growth Rate 1970-77 (%)	Pop. 1980 Census ^a	Average Annual Growth Rate 1970-80 (%)	Average Annual Growth Rate 1977-80 (%)	Pop. 1981 ^c	Pop. 1982 ^c	Pop. 1983 ^c	Average Annual Growth Rate 1980-83 (%)
Mesa County	54,374	66,848	3.0	81,530	4.1	6.8	89,009	94,381	92,784	4.6
Collbran	225	293	3.8	344	4.3	5.5	383	414	410	6.4
DeBeque	155	264	7.9	279	6.1	1.9	335	405	353	8.8
Fruita	1,822	2,328	3.6	2,810	4.4	6.5	3,102	3,300	3,252	5.2
Grand Junction	20,170	25,398	3.3	28,144	3.4	3.5	29,798	31,634	30,934	3.3
Polisde	874	1,038	2.5	1,551	5.9	14.3	1,767	1,985	1,911	7.7
Unincorporated	31,128	37,527	2.7	48,402	4.5	8.9	53,624	56,643	55,524	4.9

^a Colorado State Demographers Office (1981).

^b U.S. Bureau of the Census (1979).

^c Mesa County Policy and Research Office estimates.

Source: BMML (1982); Mountain West Research - Southwest, Inc. (1983); and Mesa County Policy and Research Office, personal communication, January 1984; and written comment April 1984.

Figure 2-12. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

Table 2-1. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

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Table 2-1. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

Method	Amount of water in the soil (g/g)
Method 1	0.15
Method 2	0.18
Method 3	0.20
Method 4	0.22
Method 5	0.25
Method 6	0.28
Method 7	0.30
Method 8	0.32
Method 9	0.35
Method 10	0.38
Method 11	0.40
Method 12	0.42
Method 13	0.45
Method 14	0.48
Method 15	0.50
Method 16	0.52
Method 17	0.55
Method 18	0.58
Method 19	0.60
Method 20	0.62
Method 21	0.65
Method 22	0.68
Method 23	0.70
Method 24	0.72
Method 25	0.75
Method 26	0.78
Method 27	0.80
Method 28	0.82
Method 29	0.85
Method 30	0.88
Method 31	0.90
Method 32	0.92
Method 33	0.95
Method 34	0.98
Method 35	1.00



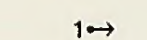
Table 2-1. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

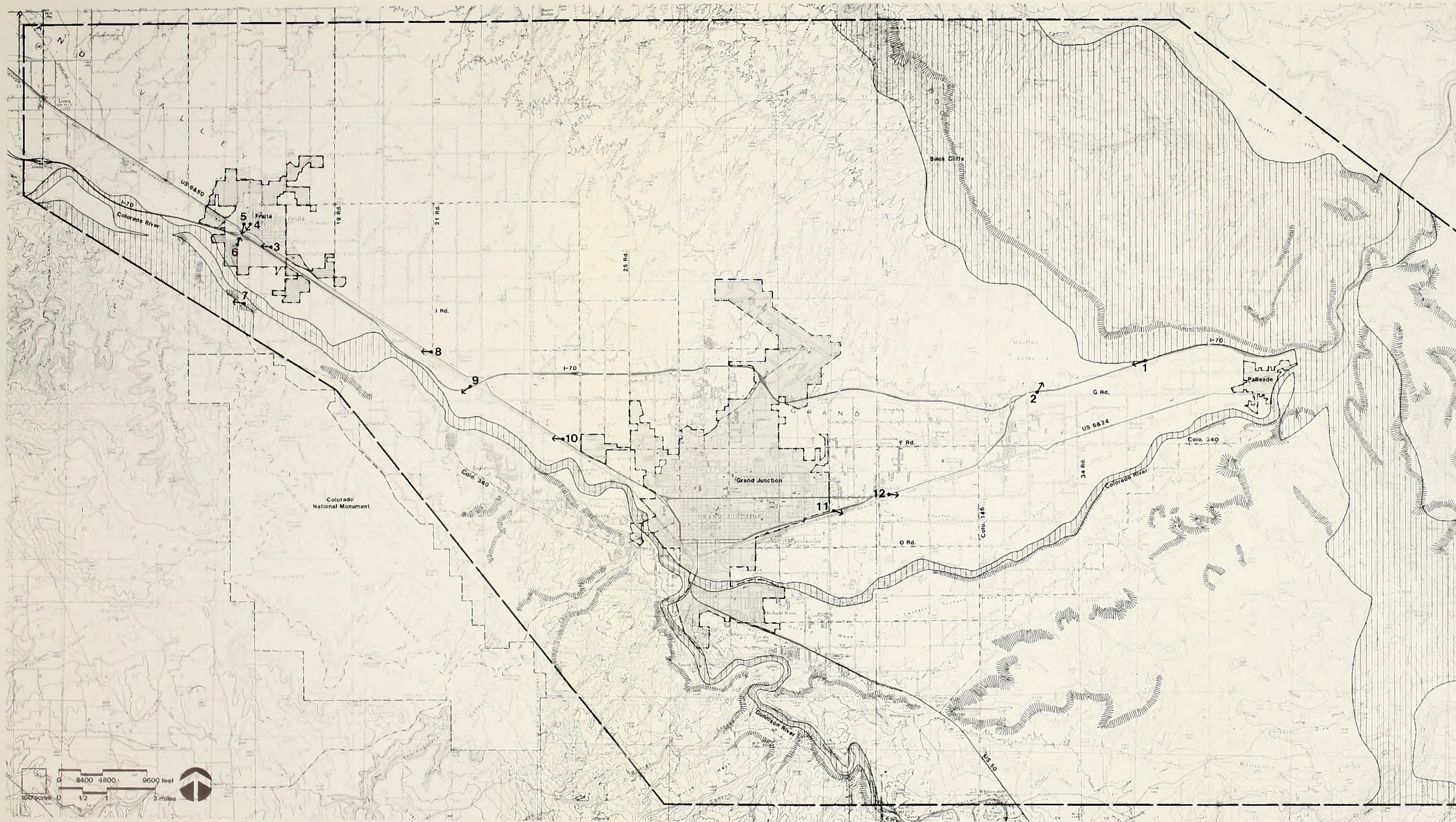
Table 2-1. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

Table 2-1. Comparison of the results of the two different methods of determining the amount of water in the soil. The results of the two methods are compared in the following table.

Visually Sensitive Areas

Figure 3-8 Revised

-  Area of high scenic quality and/or high viewer concern
-  Visually prominent ridge
-  Visual simulation location, orientation and index number



Grand Junction Conversion Transmission Line Siting Study

 Public Service Company
of Colorado

EDAW inc.

Chapter IV
Environmental
Consequences

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

Page 4-1

Section **A. INTRODUCTION**, insert the following sentences in the first paragraph:

Mitigation measures identified in Table 2-9 were incorporated into the project design and considered when assessing impacts. All impacts discussed are those remaining after mitigation is applied.

Page 4-2

Replace the first sentence in the second paragraph with the following:

Overall, about 30 percent of this corridor crosses moderately sloping to steep erodible soils, as well as some salty soils with low reclamation potential (2.5 miles).

Page 4-2

Replace the third paragraph with the following:

Alternative A will result in the disturbance of approximately 25 acres as a result of the movement of construction vehicles along the right-of-way and construction activities at tower sites. No new roads will be constructed. These impacts will be short-term and insignificant due to the committed mitigation measures and the small area of disturbance.

Page 4-2

Replace the fifth paragraph with the following:

As the corridor parallels Coal Canyon and drops down the escarpment of the face of the Book Cliffs, there is a potential mineral resource conflict. The corridor crosses the Book Cliffs coal field, an area of potential coal development. Three separate coal leases lie in Coal Canyon along the proposed route. If this route is developed, there may be some conflict with mining operations, but these are not expected to be significant.

Also, the rock outcrops at the face of the Book Cliffs are subject to rock fall particularly under cliffs, but disturbance should be minimal due to the commitment to helicopter construction in this area. Specific locations for helicopter construction will be identified in the Access Plan prepared in conformance with Section 2803, Appendix 2, page 1, of the BLM Manual. Specific links where this may be necessary are identified on Revised Figure 2-10.

Replace Section **b. Biological Resources**, with the following:

(1) Vegetation

The proposed alternative would potentially impact vegetation at tower location sites and along access routes during construction. Disturbances at tower location sites would be quite small and mitigated by revegetation with native species. Impacts of construction access roads would be mitigated using existing roads where possible and by revegetating disturbed areas following construction.

Vegetation impacts will therefore generally be limited to temporary loss of biomass and are therefore considered to be low and insignificant overall.

Saltbush shrublands, crossed for a distance of about 23.3 miles, are the predominant vegetation along the proposed alternative. Construction activities will result in the disturbance of approximately 23 acres of saltbush shrublands. The proposed alternative also crosses several other vegetation types and would result in the following amount of disturbance: agricultural lands (1.1 acres), greasewood (0.9 acre), and pinyon/juniper (0.6 acre). Long-term vegetation losses associated with transmission structures are negligible, and amount to less than an acre.

(2) Wildlife

Potential impacts to wildlife are primarily associated with disturbance during construction and potential bird collisions with the transmission lines. Loss of habitat is essentially not a factor since so little area will be permanently occupied by transmission facilities. As noted above, less than one acre will be physically occupied by transmission structures; no new access roads will be constructed.

The greatest part of the proposed alternative is in desert shrubland, especially low saltbush, which has the lowest species diversity of any native type in the area.

Standard construction techniques will be sufficient to prevent electrocution of raptors. On transmission lines of 230-kV size, the conductor separation is adequate to prevent electrocution. Cases of raptor electrocution are normally associated with lower voltage electric lines used for distribution purposes.

(3) Species of Special Concern

Impacts to federally listed threatened and endangered plants and species of state concern have been avoided by routing around known populations of such species. Additional surveys to identify the potential occurrence of threatened and endangered or sensitive species will be performed if further consultation with the Fish and Wildlife Service or CDOW indicates a need.

The portion of desert shrub north of Fruita lies within an area mapped as a prairie dog town by the DOW and BLM. Although certainly not a dense colony, the prairie dog town probably should be considered as potential habitat for the endangered black-footed ferret. If ferrets are verified within 0.25 mile of any of the PSCC 230-kV transmission rights-of-way, PSCC will retrofit the towers with adaptors that will prevent raptors from using them for perches. Adverse impacts are therefore not anticipated as a result of this project.

This route also passes through about 1.4 miles of pinyon/juniper in Coal Canyon, which represents habitat for mule deer and wild horses. The use of helicopters and the timing of construction to avoid the late winter season (December 1 to July 1) should effectively preclude any significant short-term impacts potentially associated with disturbance of wild horses or mule deer while on winter range or while foaling. PSCC has committed to using only existing roads and, if requested by the BLM, to install water bars and revegetate any existing roads used for construction. This will eliminate the potential for increased access into the area and will ensure that the available forage is not reduced.

As described in Chapter 2 of the DEA, project operation consists of only occasional minor visitation and is not expected to result in increased disturbance. The route cuts through the Book Cliffs and therefore poses a slight risk of disturbance during construction to nesting raptors, potentially including golden eagles, peregrine falcons, and prairie falcons. The historic peregrine falcon areas in the study area have not been active for several years. The nearest known active eyries are several miles from the study area. BLM conducts annual surveys of the historic nesting area which is north of the existing Cameo-Garfield 69-kV line (see Figure 3-4) to verify activity. In any event, construction timing will be altered to avoid conflict with potential nesting pairs (between February 1 and July 31).

This alternative would require an amendment to the Management Framework Plan for Roan Creek and Winter Flats because of its location through the Wild Horse Management Area.

Page 4-4

Add the following to the end of the first paragraph in section (I) Agriculture:

It is recognized that transmission lines can affect the efficient aerial spraying of crops. In two studies consulted (Gustafson 1978, and U.S. Department of Interior 1977) it was concluded that in about half the cases, aerial spraying adjacent to transmission lines was incomplete. This is, in part, accounted for by the unwillingness of some pilots to venture too near the lines. However, these studies indicated that a majority of the pilots simply considered the lines a nuisance but were able to cope with them with little extra effort; usually flying under them. In neither case was it shown that the costs of aerial spraying increased. It sometimes, however, did necessitate additional ground application.

Page 4-4

Add the following sentence to the end of the third paragraph in section (I) Agriculture:

Not all farming impacts can be eliminated; however, PSCC will fairly compensate land owners for all impacts which limit production or which measurably hinder normal farming operations.

Insert after the first paragraph of Section **e. Visual Resources**:

In addition to these rating and analysis processes, a series of twelve visual simulations were prepared to show how the proposed transmission line would appear after construction. These were done in sensitive areas and representative settings as a final basis of comparison between the various alternative corridors. The location and orientation of these simulations are shown on Figure 3-8 in Chapter 3 of this report. Visual simulation Number 1 (Figure 4-1) and visual simulation Number 2 (Figure 4-2) were done for the Cameo-Fruita Segment.

The preparation of these simulations first involved taking and carefully recording the base photography on which the simulations of the transmission line would be rendered. The location and field of view of each photograph was carefully plotted on a 1" = 400' scale aerial photograph base map. The desired photographs were then enlarged to 16" x 20". A computer program (PWRPLT) developed by EDAW inc. was then used to plot scale-accurate drawings of the proposed transmission towers. The variables needed as input to ensure scale accuracy include: distance to a known reference object in the photograph, distance to the tower to be simulated, true height of the reference object, true height of the tower, scale size of the reference object, and angle of rotation of the tower. These drawings are accurately located in the field of view of the photograph through a combination of angle calculations from the 1" = 400' scale air photographs and the 16" x 20" enlarged color prints. These images are then rendered onto the color prints through a variety of graphic techniques.

Replace section **I. Proposed Alternative (Alternative BB)** with the following:

(Alternative BB remains as a primary alternative but is no longer the proposed alternative for the Horizon-Fruita Segment.)

I. Proposed Alternative (Alternative J)

a. Physical Resources

(1) Soils

The proposed alternative follows a direct westerly pattern over nearly level to gently sloping alluvial soils for about two miles to the intersection of U.S. Highway 6 & 50. From this point to the proposed Fruita Substation, the right-of-way creates little conflict with the soil resource.

For less than 0.2 mile in Link 68, at the connection with Link 62 and near the tributaries of Big Salt Wash, the soils are steeper, more clayey and thus, more erosive. Overall, about 1.5 percent of the length of Alternative J crosses soils that would require mitigation.

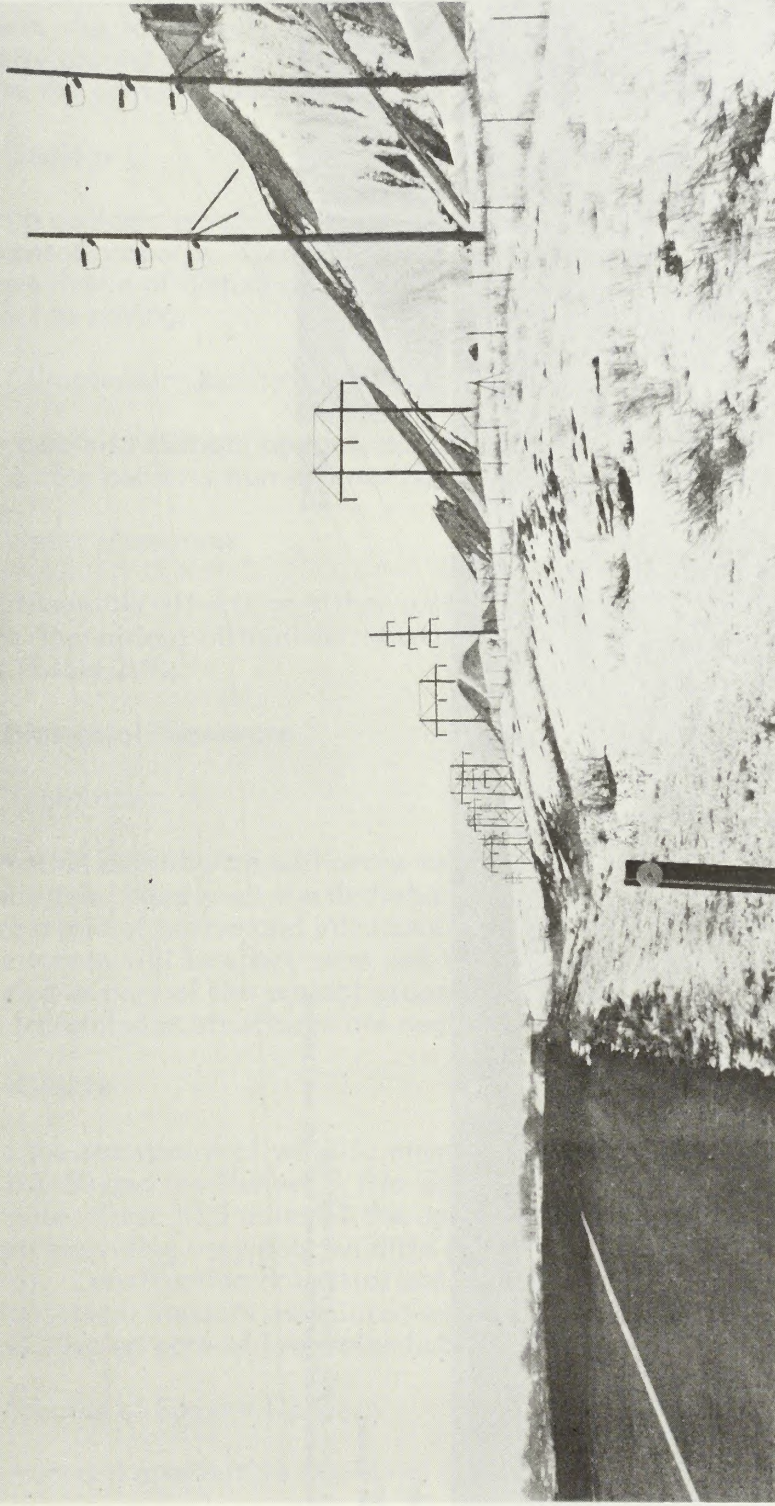
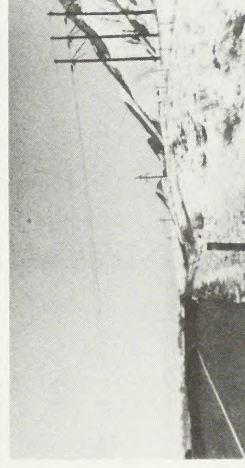


Photo Simulation

Cameo-Fruita Segment
Alternative AA near I-70 and Mt. Garfield

75 foot wood H-frame towers as seen from 770-2710 feet;
60 foot single pole double circuit towers
as seen from 760-3430'feet.



Existing
Condition

Visual Simulation 1

Visual Simulation 2

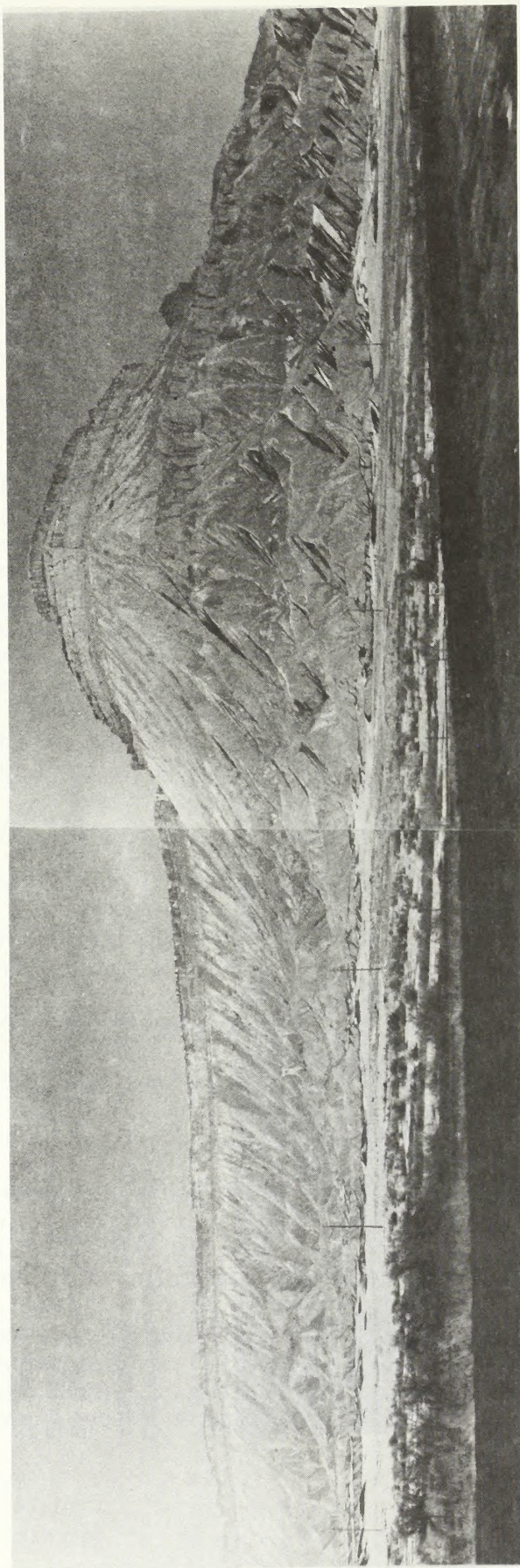


Photo Simulation

Camano-Fruita Segment
Alternative WW at Mt. Garfield

140 foot steel lattice towers as seen from 8330 and 8820 feet.
85 and 105 foot wood towers (background left) as seen from 7000 and 7340 feet



Existing
Condition

Disturbance to soils along this alternative will be due to tower placement only. (Sufficient access exists along this route so that no overland travel will be required). Approximately 2.2 acres will be disturbed altogether by construction activity around tower sites. These impacts will be short term and insignificant due to the committed mitigation measures and the small area of disturbance.

(2) Geology

From a geologic perspective, this route crosses areas of little or no known environmental concerns. Generally, the only area where mitigation may be required is the avoidance of disturbance along the steep banks of the washes, as they are subject to caving.

(3) Climate/Air Quality

No impacts to climate are anticipated and minor, short-term increases in fugitive dust during construction will not have a noticeable effect on air quality.

(4) Water Resources

No measurable effects on either surface or ground water resources are expected due to the various mitigation measures committed to at drainage and river crossings (Table 2-9).

b. Biological Resources

(1) Vegetation

Vegetation disturbance will occur to approximately 2.2 acres as a result of tower installation. Nearly all the disturbance will occur in previously disturbed areas where a mix of native and introduced species have become established. These disturbances will be short term and insignificant due to the reclamation measures included as part of the project proposal. Long-term vegetation losses associated with transmission structures are negligible, and amount to less than an acre.

(2) Wildlife

From the standpoint of wildlife impacts, the proposed alternative along U.S. Highway 6 & 50 and the Denver & Rio Grande Western (D&RGW) Railroad is the most desirable. Over 10.5 miles of the approximately 12 mile total length is in urban habitat providing very poor wildlife potential. The balance is in agricultural habitat. Construction activities are not expected to disturb any sensitive habitats and long-term impacts associated with habitat loss will be negligible, amounting to less than an acre of low-value habitat.

(3) Species of Special Concern

The proposed alternative would not affect any species of special concern.

c. Land Use

(1) Agriculture

Alternative J in the Horizon-Fruita segment is not expected to have any conflicts with agriculture. This is due to the large portion of the route which would parallel the railroad.

(2) Urban

Urban concerns in transmission line siting were previously discussed in Section C.I.c. Link 54 would create one potentially significant land use limitation, i.e., limitations to its future development. This parcel is located just east of 23 Road, where the alignment would meet the railroad. In addition, approximately five residences would be affected by the acquisition of right-of-way, and one mile of the line would be located in private land and not follow existing rights-of-way.

(3) Recreation and Preservation

No conflicts with recreation areas are expected to occur with this alternative.

(4) Transportation and Utilities

Alternative J parallels the D&RGW Railroad for approximately 5.25 miles (Links 58, 59, 61, 62, 68); a potential conflict with the railroad's communication system may require special mitigation. The route would also run parallel to U.S. Highway 6 & 50; depending upon the exact location of the alignment, traffic disruption may occur during construction.

(5) Miscellaneous Uses

This alternative should not conflict with any miscellaneous uses.

(6) Land Ownership

The entire 12.2 miles of Alternative J are located on private land.

d. Cultural Resources

(1) Archaeology

There are no known archaeological resources located near this corridor.

(2) History

A number of historic sites lie in or near this corridor. Link 41 passes by a historic structure recommended eligible to the NRHP. Link 68 passes near a large number of historic homes in the town of Fruita which have been recommended as eligible to the NRHP. None of these sites would be directly influenced by the proposed transmission line, as they lie north of the proposed corridor and are separated from the route by both U.S. Highway 6 and the railroad.

(3) Paleontology

There are no known paleontological resources along this alternative.

e. Visual Resources

A series of eight visual simulations were prepared for the Horizon-Fruita Segment. These are visual simulation Numbers 3 through 10 (Figures 4-3 through 4-10) as indicated on Figure 3-8 in Chapter 3.

(1) Contrast Rating

No public lands are located along this alternative, and it was not rated for visual contrasts.

(2) Visual Prominence From Homes

The proposed alternative would be seen prominently from 26 homes and would be evident to 251 homes. The majority of homes with prominent views would be seeing Link 41 (21 homes would be viewing this portion of line). Link 68 would be evident to 161 of the 251 homes in the "evident" total.

(3) Visual Conflicts

Much of this alternative would be seen as either prominent or evident from U.S. Highway 6 & 50. (It is also seen from I-70 as evident, but where there is overlap, the higher rating of prominent from U.S. Highway 6 & 50 was used.) Approximately 44 poles (4.6 miles) along this alternative would be seen as visually prominent from U.S. Highway 6 & 50 between Links 61 and 68. Some 46 poles (4.8 miles) would be seen as visually evident, mostly along Link 68 through the heavily developed portions of Fruita.

Page 4-29

Insert the following as the second paragraph in section (1) Soils:

Approximately 1.4 acres will be disturbed during construction as a result of vehicles and equipment moving along the right-of-way. An additional 3.1 acres will be disturbed at tower sites. These impacts will be short-term and insignificant due to the committed mitigation measures and the small area of disturbance.

Page 4-29

Insert the following as the second paragraph in (1) Vegetation:

Approximately 1.4 acres would be disturbed due to new access requirements in saltbush and greasewood vegetation types. An additional 3.1 acres would be disturbed for placement of towers along the line. The majority of this is in urban vegetation types. Due to the reclamation measures proposed as part of this project, the vegetative impacts would be short term and insignificant.

Long-term vegetation losses associated with physical displacement by transmission facilities would be negligible, amounting to less than an acre.

This is a list of the names of the persons who are mentioned in the text.

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

(3) The following

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

Page 11

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

Page 12

The first name is John Doe. The second name is Jane Smith. The third name is Robert Brown. The fourth name is Mary White. The fifth name is Charles Green. The sixth name is Elizabeth Black. The seventh name is William Grey. The eighth name is Susan Red. The ninth name is David Blue. The tenth name is Margaret Yellow.

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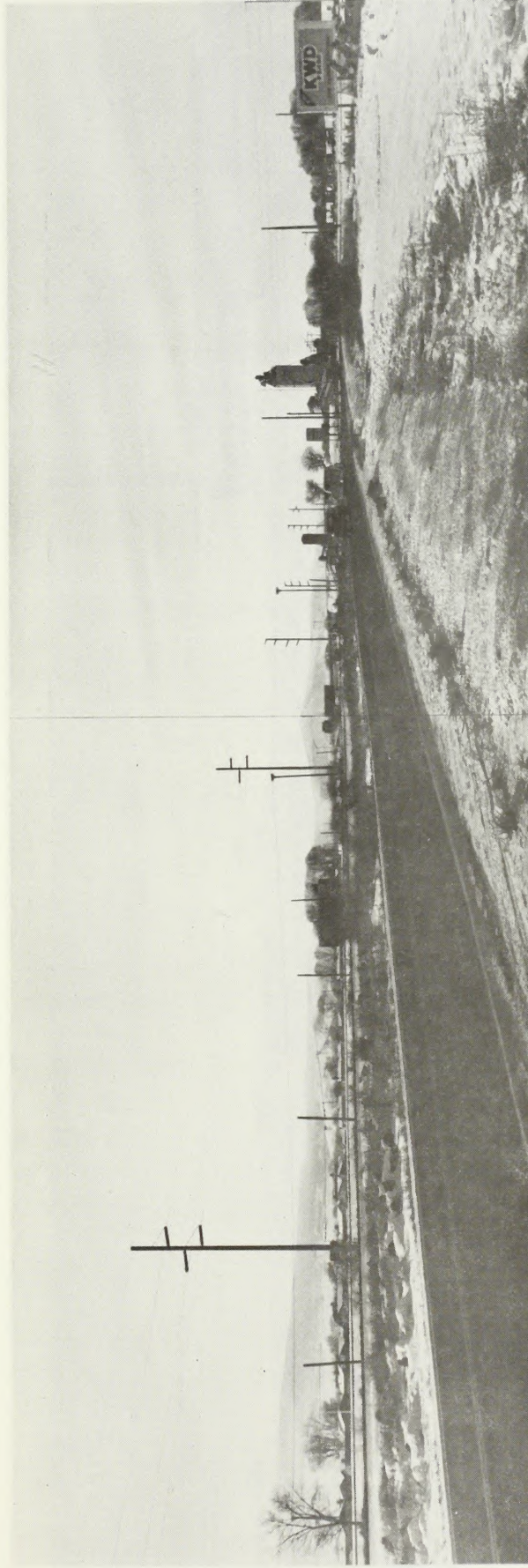


Photo Simulation

Horizon-Fruita Segment
Alternative J in the Fruita vicinity.

80 foot wood poles as seen from 440 and 985 feet.
95-120 foot steel poles as seen from 1565-3160 feet.



Existing
Condition

Visual Simulation 3

Visual Simulation 4



Photo Simulation

Horizon-Frulia Segment
Alternative J in Traffic

80-118 '001 wood and steel poles as seen from 1115-1774 feet



Existing
Condition

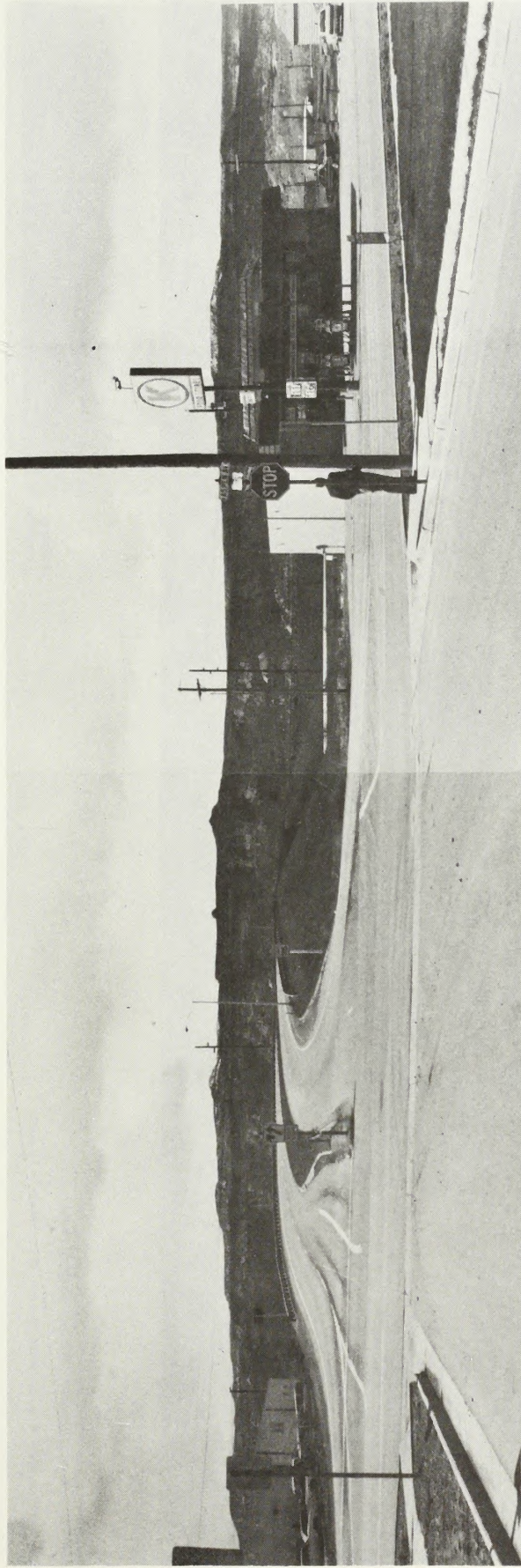


Photo Simulation
 Horizon-Fruta Segment
 Alternative J through Fruta

95-118 foot poles as seen from 1010-1360 feet



Existing
 Condition

Visual Simulation 5

Visual Simulation 6

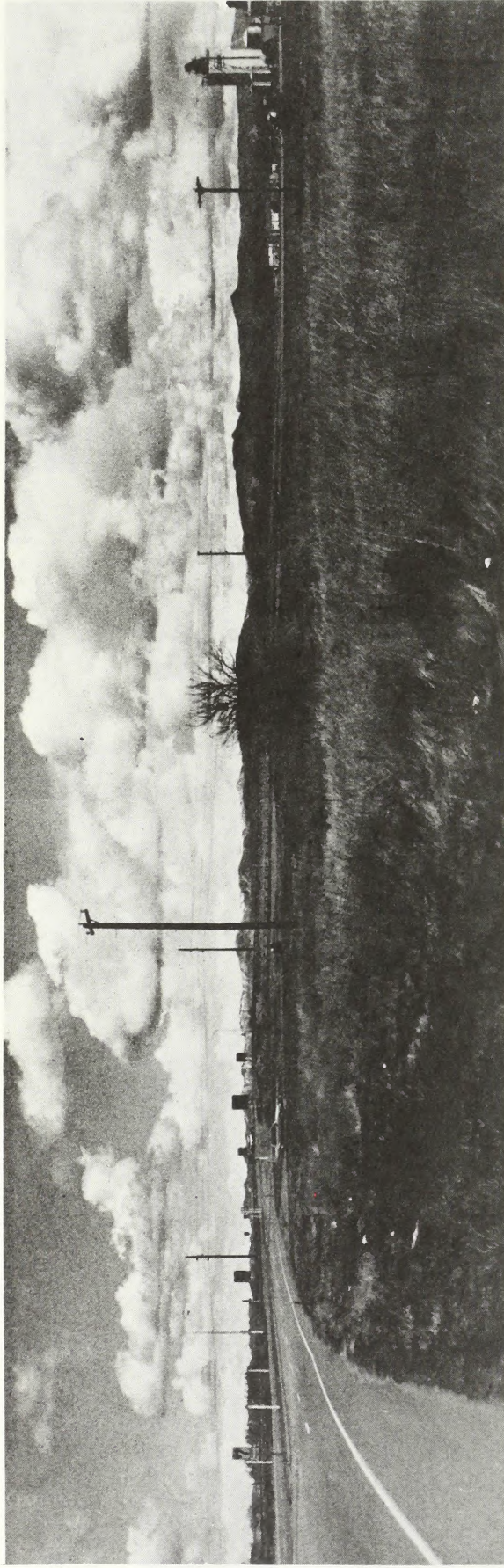
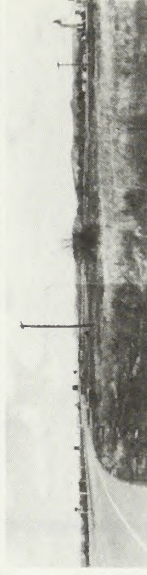


Photo Simulation

Horizon-Fruita Segment
Alternative J along Highway 340 just south of Fruita
95-118 foot steel & wood poles as seen from 1300-1475 feet



Existing
Condition



Photo Simulation

Horizon-Fruita Segment
 Alternatives L and BB at King's View Subdivision
 95 foot double circuit steel towers as seen from 970-2860 feet



Existing
 Condition

Visual Simulation 7

Visual Simulation 8

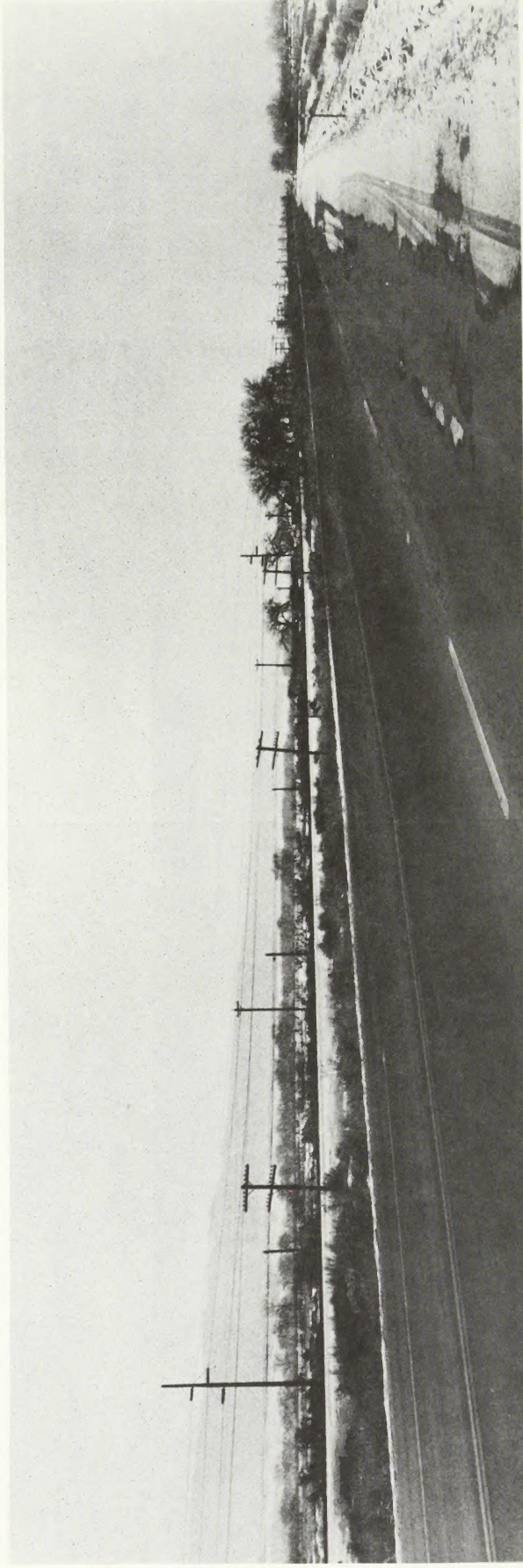


Photo Simulation

Horizon-Fruita Segment
Alternative J along Highway 6 & 50 near 21 Road
80 foot wood poles as seen from 300 feet and beyond.



Existing
Condition

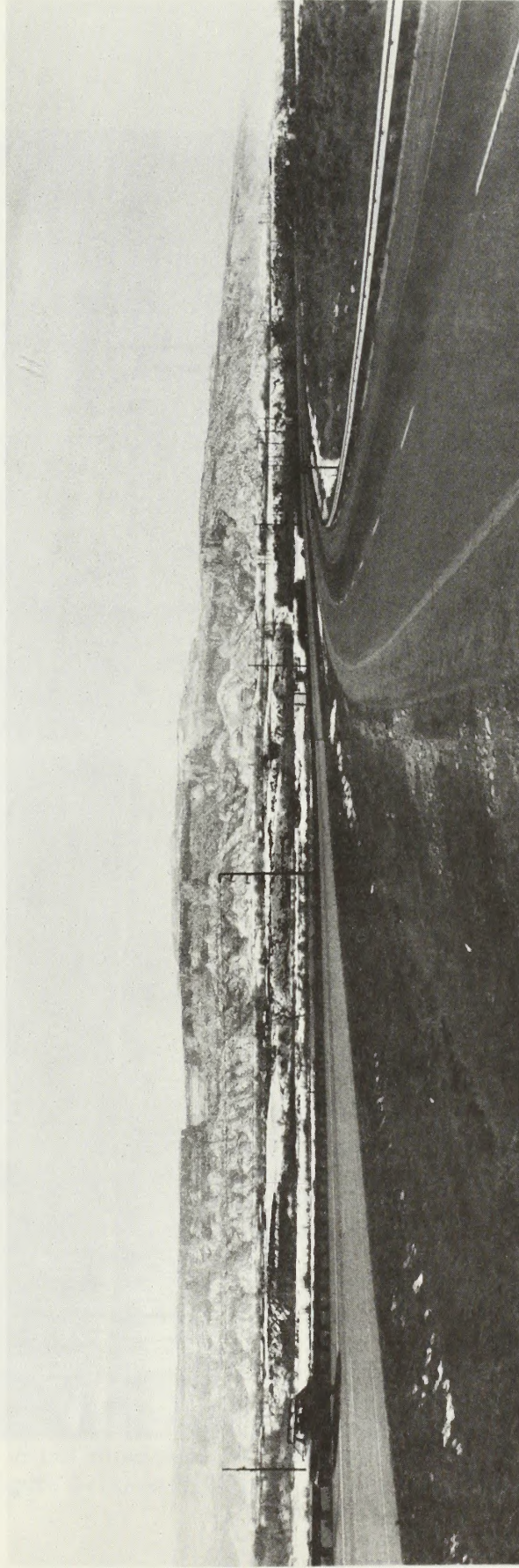


Photo Simulation

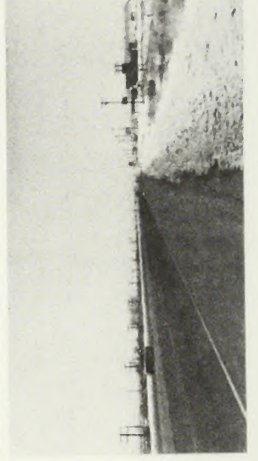
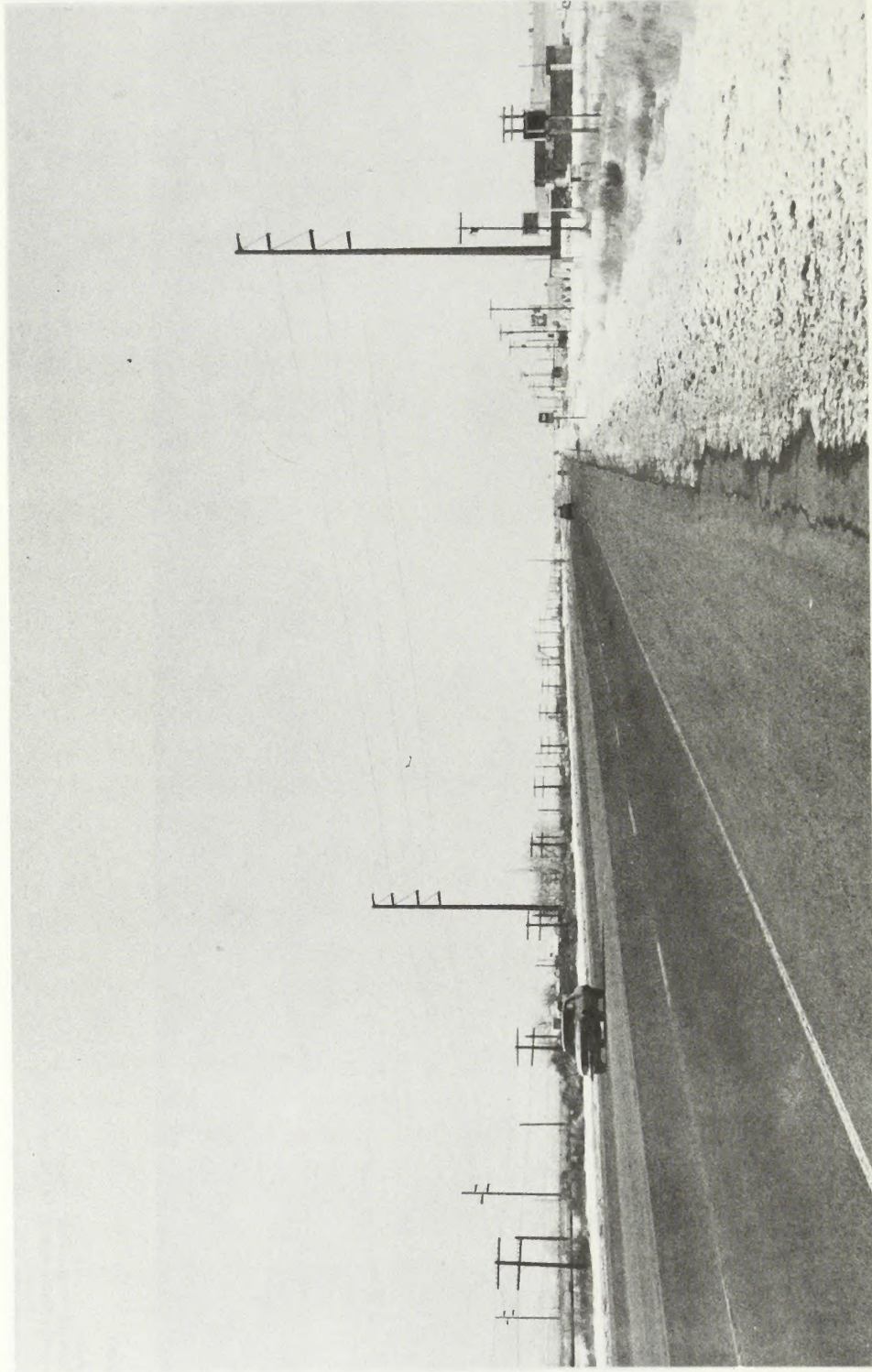
Horizon-Fruita Segment
 Alternative BB at Colorado River crossing from I-70
 overpass of U.S. Highway 6&50 west of Grand Junction
 75-95 foot towers as seen from 960-6140 feet



Existing
 Condition

Visual Simulation 9

Visual Simulation 10



Replace section (2) Wildlife with the following:

(2) Wildlife

The highly disturbed urban corridor along U.S. Highway 6 & 24 and the D&RGW Railroad poses substantially lower wildlife impact risks than the other alternatives in this segment. The remaining portions are primarily in low-value desert shrub, with only 0.6 mile through riparian habitat and 2.6 miles through agricultural land (out of the 11.7 miles total). Construction activities are not expected to disturb any sensitive habitats at critical times, and long-term impacts associated with habitat loss will be negligible, amounting to less than an acre of primarily low value habitats. This alternative does, however, cross the Colorado River and some waterfowl losses will occur as a result of collisions with the line at this location.

Recent studies on the subject of avian collisions with transmission lines indicate that the vast majority of collisions (83 to 93 percent) occur with the ground wire rather than the conductors. These studies also indicate that transmission lines are inevitably a source of avian mortality to some degree, but the numbers of individuals killed is not biologically significant, even when study areas included "worst case" wetland areas. Further, the studies indicate that the mortality rate can be reduced by as much as half through marking the ground wire. See Chapter VIII, Literature Cited.

Precautionary measures which will be taken by PSCC at this river crossing include placing the conductors in a single horizontal plane and marking the ground wire. This portion of the river is not known to be a major use area of threatened or endangered species. Waterfowl losses are therefore expected to be low and insignificant.

Additional mitigations at river crossings include using existing access, minimizing removal of trees, setback of towers, and shooting the lead wires across during stringing operations.

(3) Species of Special Concern

The crossing of the Colorado River near the eastern end of the system is a minor risk to waterfowl, wading birds, and wintering bald eagles. As indicated in the wildlife section above, a variety of conservation measures are proposed in an effort to minimize conflicts to the greatest degree possible. There would be no effect on fish species in the Colorado River.

Add the following as the first paragraph in Section **e. Visual Resources**:

Two visual simulations were prepared for the Grand Junction-Clifton-Colorado Ute Segment. These are visual simulation Number 11 (Figure 4-11) and visual simulation Number 12 (Figure 4-12) as indicated on Figure 3-8 in Chapter 3.

1. The first step is to identify the problem.

2. The second step is to define the problem.

3. The third step is to identify the causes of the problem. This step involves a thorough analysis of the problem and its underlying causes. It is important to identify all possible causes, both internal and external, and to determine their relative importance. This step is often the most difficult, as it requires a deep understanding of the problem and its context.

4. The fourth step is to develop a plan of action. This step involves identifying the specific actions that need to be taken to address the problem. It is important to develop a clear and concise plan that outlines the steps to be taken, the resources required, and the timeline for completion.

5. The fifth step is to implement the plan. This step involves putting the plan into action and monitoring progress. It is important to stay focused on the plan and to make adjustments as needed.

6. The sixth step is to evaluate the results. This step involves assessing the effectiveness of the plan and identifying areas for improvement.

7. The seventh step is to document the results. This step involves recording the findings of the evaluation and the actions taken to address the problem. This documentation is important for future reference and for sharing the results with others.

8. The eighth step is to communicate the results.

9. The ninth step is to review the process. This step involves reflecting on the entire process and identifying lessons learned. It is important to review the process to ensure that it was effective and to identify areas for improvement.

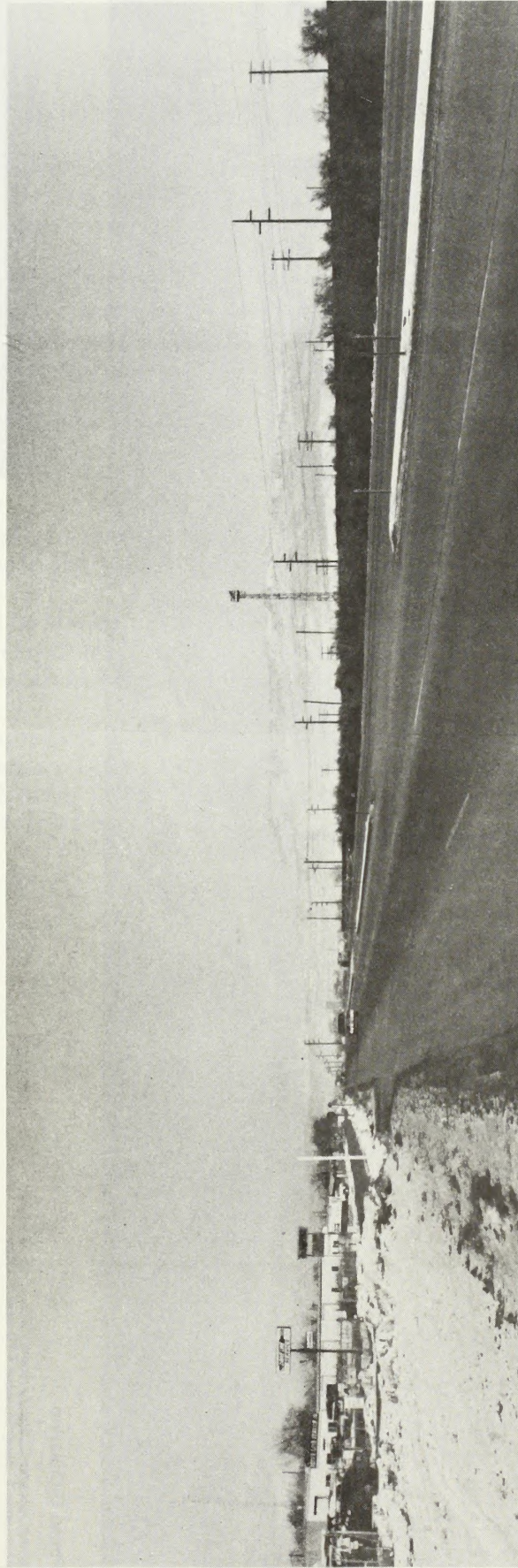


Photo Simulation

Grand Junction-Clifton-Colorado Ute Segment
Alternative A along Business I-70 near 29 Road

80 foot wood poles as seen from 860 feet and beyond;
110-115 foot steel poles as seen from 3715 and 3815 feet.



Existing
Condition

Visual Simulation 11

Visual Simulation 12

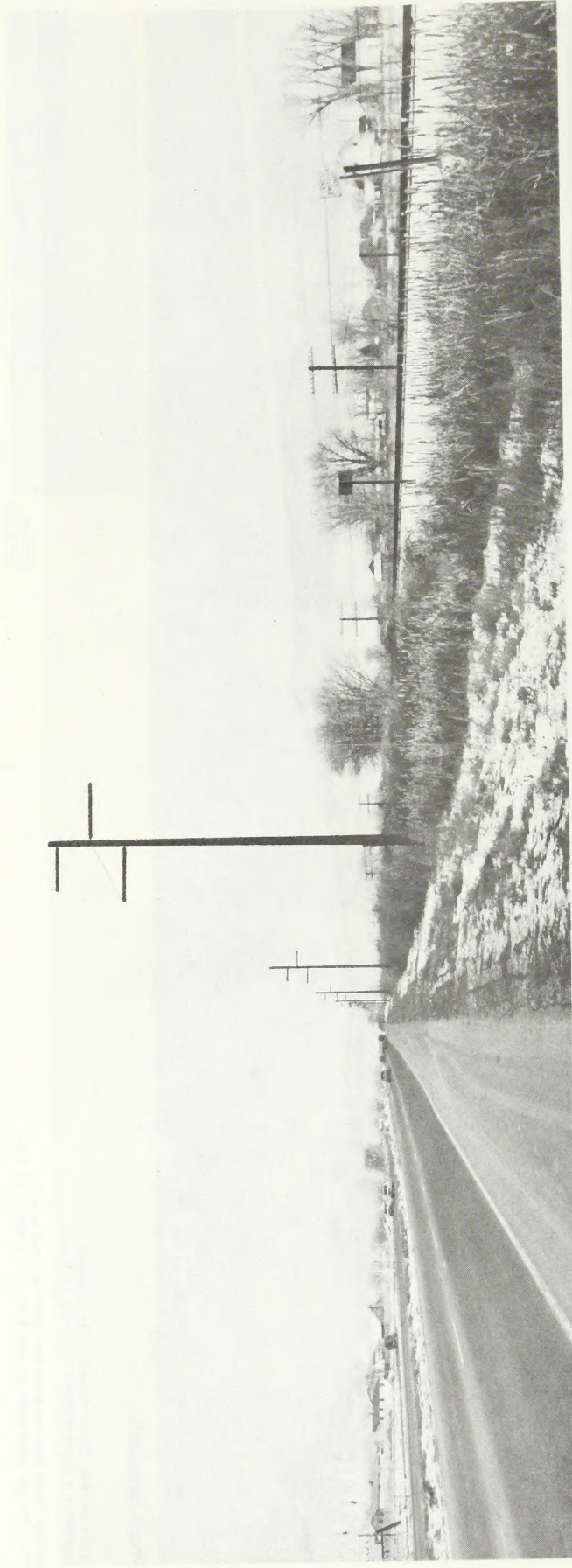


Photo Simulation

Grand Junction-Clifton Segment
Alternative A along Business I-70 near 30 Road

85 foot towers as seen from 450 to approximately 6000 feet



Existing
Condition

Replace the second paragraph on this page with the following:

The proposed 230-kV transmission line has been designed to meet or exceed all requirements set forth by the National Electrical Safety Code (NESC), which states "for voltages exceeding 98 kilovolts alternating current to ground or 139 kilovolts direct current to ground, either the clearances shall be increased or the electric field, or the effects thereof, shall be reduced by other means as required to limit the current due to electrostatic effects to 5.0 milliamperes RMS (root mean square), if an ungrounded metal fence, building, sign, chimney, radio or television antenna, tank containing nonflammables, or other installation of any ungrounded metal attachments thereto, were short circuited to ground."

Replace first two paragraphs of Section **J, SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY**, with the following:

Short-term is defined as the estimated life of the proposed project, and long-term as the period thereafter. Calculations used to estimate quantities of disturbed areas are shown in Revised Table 4-2.

Construction of the proposed alternatives for each system would result in disturbance to approximately 14.1 acres for required new access (12.6 acres Cameo-Fruita and 1.5 acres Grand Junction-Clifton) and 18.5 acres for the transmission tower and line installation.

REVISED TABLE 4-2
SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY
CALCULATIONS FOR AREAS DISTURBED
OR TAKEN OUT OF PRODUCTION

Acres Disturbed During Construction

(access assumed to exist where replacing existing 69-kV transmission lines)

Access

Cameo-Fruita	10.4 miles x 10 ft. width =	549,120 sq. ft. =	12.6 acres
Grand Junction-Clifton	1.2 miles x 10 ft. width =	63,360 sq. ft. =	1.5 acres
Horizon-Fruita	0 miles		<u>0.0</u> acres
			14.1 acres

Tower and Line Installation

84 Single steel poles	@ 900 sq. ft. each =	76,600 sq. ft.	
28 Three pole wood	@ 5,000 sq. ft. each =	140,000 sq. ft.	
4 Steel H-frame (Helicopter construction)	@ 900 sq. ft. each =	3,600 sq. ft.	
185 Wood H-frame	@ 2,500 sq. ft. each =	462,500 sq. ft.	
139 Single wood poles	@ 900 sq. ft. each =	<u>125,100</u> sq. ft.	
		807,800 sq. ft. =	18.5 acres

Acres Removed from Production or Precluded from Development

Urban Growth Areas

Cameo-Fruita	1.5 miles 80' right-of-way =	633,600 sq. ft. =	14.5 acres
Horizon-Fruita	1.92 miles 50' right-of-way =	506,900 sq. ft. =	11.6 acres
Grand Junction-Clifton	0.48 miles 60' right-of-way =	152,040 sq. ft. =	3.5 acres
Grand Junction-Clifton	0.69 miles 20' right-of-way =	73,000 sq. ft. =	1.7 acres
Clifton Substation	300' x 400'	= 120,000 sq. ft. =	<u>2.75</u> acres
			34.05 acres

Agricultural Land*

17 Wood H-frame in fields	@ 1,100 sq. ft. each =	18,700 sq. ft. =	0.43 acres
1 Single pole structure in field	@ 291 sq. ft. each =	291 sq. ft. =	0.01 acre
4 Wood H-frame at edge of field	@ 550 sq. ft. each =	2,200 sq. ft. =	0.05 acre
6 Single pole structures at edge of field	@ 145.5 sq. ft. each =	873 sq. ft. =	0.02 acre
Fruita Substation			<u>4.75</u> acres
			5.26 acres

* Source: Miscellaneous Publication 1713-1978
Agricultural Experiment Station
University of Minnesota

**Chapters V-VIII
Preparers,
Consultation,
Glossary and
Literature Cited**

CHAPTER V - LIST OF PREPARERS

Page 5-1

Revise the following:

Wayne Von Feldt, Electrical Effects, Underground Construction.

CHAPTER VI - CONSULTATION AND COORDINATION

Page 6-2

Add the following to the end of the page:

Isbill Associates, Inc., Consultants to Walker Field
Walt Schreiber.

CHAPTER VI - COORDINATION AND COORDINATION

Page 6-3

Add the following to the end of the paper:

Bill Associates, Inc., Consultants to Walter F. Bill
Walt Solverson.

CHAPTER VII - GLOSSARY

No changes or additions.

James, Earl W., and Hulse, Anna A., Factors Affecting Avian Flight Behavior and
Efficient Reliability of Transmission Lines. Prepared for Bonneville Power
Administration, U.S. Department of Energy, Portland, Oregon, 1979.

James, Earl W., and Hulse, Anna A., Factors Affecting Avian Flight Behavior and
Efficient Reliability of Transmission Lines. Prepared for Bonneville Power
Administration, U.S. Department of Energy, Portland, Oregon, 1979.

James, Earl W., and Hulse, Anna A., Factors Affecting Avian Flight Behavior and
Efficient Reliability of Transmission Lines. Prepared for Bonneville Power
Administration, U.S. Department of Energy, Portland, Oregon, 1979.

James, Earl W., Hulse, Anna A., Elmore, V.R., and Boyer, M.P., Factors Affecting
Efficient Reliability of Transmission Lines. Prepared for Bonneville Power
Administration, U.S. Department of Energy, Portland, Oregon, 1979.

U.S. Department of Interior, Bureau of Land Management, Factors Affecting
Efficient Reliability of Transmission Lines. Prepared for Bonneville Power
Administration, U.S. Department of Energy, Portland, Oregon, 1979.

CHAPTER VII - GLOSSARY

No changes or additions

CHAPTER VIII - LITERATURE CITED

Add the following references to this chapter:

James, Brad W. and Haak, Bruce A. Factors Affecting Avian Flight Behavior and Collision Mortality of Transmission Lines. Prepared for Bonneville Power Administration, U.S. Department of Energy. Portland, Oregon. 1979.

Faanes, Craig A. U.S. Fish and Wildlife Service, Northern Prairie Wildlife Research Center, Jamestown, North Dakota. Assessment of Powerline Siting in Relation to Bird Strikes in the Northern Great Plains. 1983.

Beaulaurier, Diane. Mitigation of Bird Collisions With Transmission Lines. Prepared for Bonneville Power Administration, U.S. Department of Energy, Portland, Oregon. 1981.

Gustafson, R.J., Morey, R.V., Eidman, V.R. and Meyer, M.P. Report of an Investigation of Electric Power Transmission and Agriculture Compatibility in the MAPP Region. Miscellaneous Publication 1713, Agricultural Experiment Station, University of Minnesota. 1978.

U.S. Department of Interior, Bonneville Power Administration. The Role of the Bonneville Power Administration in the Pacific Northwest Power Supply System, Draft Environmental Statement. 1977.

Appendices

Appendix A
Route Development and Evaluation Process

Table A-1

Replace Table A-1, **CORRIDOR COMBINATIONS**, with Revised Table A-1 following:

Table A-2

Replace Table A-2, Pages 1 through 8 of 8, with Revised Table A-2 following:

Table A-3

Replace Table A-3, Pages 1 of 8 and 7 of 8, with the following revised pages to Table A-3:

Figure A-1

Replace Figure A-1 with Revised Figure A-1 following:

Figure A-2

Replace Figure A-2 with Revised Figure A-2 following:

**TABLE A-I REVISED
CORRIDOR COMBINATIONS**

Horizon - Fruita Segment

<u>Corridor</u>	<u>Links</u>	<u>Corridor</u>	<u>Links</u>
B	38, 39, 43, 49, 56, 64, 68	AA	33, 34, 37, 43, 49, 56, 64, 67, 69
C	38, 39, 43, 49, 56, 64, 67, 69	BB	41, 47, 54, 57, 66, 69
E	38, 42, 45, 49, 56, 64, 68	CC	38, 42, 48, 55, 59, 60, 66, 69
F	38, 42, 45, 49, 56, 64, 67, 69	DD	41, 47, 54, 58, 59, 60, 66, 69
H	38, 42, 48, 51, 56, 64, 68	EE	41, 44, 48, 55, 59, 60, 66, 69
I	38, 42, 48, 51, 56, 64, 67, 69	FF	41, 47, 50, 55, 59, 60, 66, 69
J	41, 47, 54, 58, 59, 61, 62, 68	GG	41, 44, 48, 55, 59, 61, 62, 68
L	41, 47, 54, 58, 59, 61, 62, 67, 69	HH	41, 47, 50, 55, 59, 61, 62, 68
N	41, 44, 45, 49, 56, 64, 68	II	38, 39, 43, 49, 56, 65, 14, 24, 30, 32
O	41, 44, 45, 49, 56, 64, 67, 69	JJ	38, 42, 45, 49, 56, 65, 14, 24, 30, 32
Q	41, 44, 48, 51, 56, 64, 68	KK	38, 42, 48, 51, 56, 65, 14, 24, 30, 32
R	41, 44, 48, 51, 56, 64, 67, 69	LL	41, 47, 54, 58, 59, 61, 63, 65, 14, 24, 30, 32
T	41, 47, 50, 51, 56, 64, 68	MM	41, 44, 45, 49, 56, 65, 14, 24, 30, 32
U	41, 47, 50, 51, 56, 64, 67, 69	NN	41, 44, 48, 51, 56, 65, 14, 24, 30, 32
W	38, 42, 48, 55, 59, 61, 62, 68	OO	41, 47, 50, 51, 56, 65, 14, 24, 30, 32
X	38, 42, 48, 55, 59, 61, 62, 67, 69	PP	38, 42, 48, 55, 59, 61, 63, 65, 14, 24, 30, 32
Z	33, 34, 37, 43, 49, 56, 64, 68	QQ	43, 49, 56, 65, 33, 34, 37, 14, 24, 30, 32

Grand Junction - Clifton - Colorado Ute Segment

<u>Corridor</u>	<u>Links</u>	<u>Corridor</u>	<u>Links</u>
A	71, 72, 82, 83, 91, 92	M	71, 73, 75, 76, 80, 93, 91, 83
B	71, 72, 82, 83, 91, 93	N	71, 73, 75, 76, 79, 88, 86, 84b, 84a, 83, 91, 92
C	71, 72, 82, 84a, 84b, 86, 87, 90	O	71, 73, 75, 76, 79, 88, 86, 84b, 84a, 83, 91, 93
D	71, 73, 74, 77a, 77b, 84a, 83, 91, 92	P	71, 73, 75, 76, 79, 88, 87, 90, 92, 91, 83
E	71, 73, 74, 77a, 77b, 84a, 83, 91, 93	Q	71, 73, 75, 76, 79, 88, 87, 90, 93, 91, 83
H	71, 73, 74, 78, 86, 84b, 84a, 83, 91, 92	R	71, 73, 75, 76, 79, 89, 90, 92, 91, 83
I	71, 73, 74, 78, 86, 84b, 84a, 83, 91, 93	S	71, 73, 75, 76, 79, 89, 90, 93, 91, 83
J	71, 73, 74, 78, 87, 90, 92, 91, 83	T	71, 72, 81, 82, 91, 92
K	71, 73, 74, 78, 87, 90, 93, 91, 83	U	71, 72, 81, 82, 91, 93
L	71, 73, 75, 76, 80, 92, 91, 83		

Cameo - Fruita Segment

<u>Corridor</u>	<u>Links</u>	<u>Corridor</u>	<u>Links</u>
A	1, 3, 7/8, 19*, 25, 27*, 95	AA	1, 2, 7/8, 19*, 25, 27*, 95
B	1, 3, 7/8, 18, 21, 25, 27, 31, 32	BB	1, 2, 7/8, 18, 21, 25, 27, 31, 32
C	1, 3, 7/8, 19*, 25, 26, 29, 31, 32	CC	1, 2, 7/8, 19*, 25, 26, 29, 31, 32
D	1, 3, 7/8, 18, 21, 25, 26, 29, 31, 32	DD	1, 2, 7/8, 18, 21, 25, 26, 29, 31, 32
E	1, 3, 7/8, 18, 20, 23, 29, 31, 32	EE	1, 2, 7/8, 18, 20, 23, 29, 31, 32
F	1, 3, 7/8, 16, 23, 29, 31, 32	FF	1, 2, 7/8, 16, 23, 29, 31, 32
G	1, 3, 7/8, 18, 20, 22, 24, 30, 32	GG	1, 2, 7/8, 18, 20, 22, 24, 30, 32
H	1, 3, 7/8, 16, 22, 24, 30, 32	HH	1, 2, 7/8, 16, 22, 24, 30, 32
I	1, 3, 6, 12, 15, 17, 19, 25, 27, 31, 32	II	1, 2, 6, 12, 15, 17, 19, 25, 27, 31, 32
J	1, 3, 6, 12, 15, 17, 18, 21, 25, 27, 31, 32	JJ	1, 2, 6, 12, 15, 17, 18, 21, 25, 27, 31, 32
K	1, 3, 6, 12, 15, 16, 23, 29, 31, 32	KK	1, 2, 6, 12, 15, 16, 23, 29, 31, 32
L	1, 3, 6, 12, 15, 16, 22, 24, 30, 32	LL	1, 2, 6, 12, 15, 16, 22, 24, 30, 32
M	1, 3, 6, 12, 15, 17, 19, 25, 26, 29, 31, 32	MM	1, 2, 6, 12, 15, 17, 19, 25, 26, 29, 31, 32
N	1, 3, 6, 12, 15, 17, 18, 21, 25, 26, 29, 31, 32	NN	1, 2, 6, 12, 15, 17, 18, 21, 25, 26, 29, 31, 32
O	1, 3, 7/8, 19*, 25, 26, 28, 30, 32	OO	1, 2, 7/8, 19*, 25, 26, 28, 30, 32
P	1, 3, 7/8, 18, 21, 25, 26, 28, 30, 32	PP	1, 2, 7/8, 18, 21, 25, 26, 28, 30, 32
Q	1, 3, 7/8, 18, 20, 23, 28, 30, 32	QQ	1, 2, 7/8, 18, 20, 23, 28, 30, 32
R	1, 3, 7/8, 16, 23, 28, 30, 32	RR	1, 2, 7/8, 16, 23, 28, 30, 32
S	1, 3, 6, 12, 15, 17, 19, 25, 26, 28, 30, 32	55	1, 2, 6, 12, 15, 17, 19, 25, 26, 28, 30, 32
T	1, 3, 6, 12, 15, 17, 18, 21, 25, 26, 28, 30, 32	TT	1, 2, 6, 12, 15, 17, 18, 21, 25, 26, 28, 30, 32
U	1, 3, 6, 12, 15, 16, 23, 28, 30, 32	UU	1, 2, 6, 12, 15, 16, 23, 28, 30, 32
V	1, 3, 6, 11, 13, 14, 24, 30, 32	VV	1, 2, 6, 11, 13, 14, 24, 30, 32
W	1, 3, 7/8, 19*, 25, 27*, 94**	WW	1, 2a, 2*, 7/8, 19*, 25, 27*, 95
		ZZ	1, 3, 7/8, 96, 97, 98, 27, 95
		AAA	1, 3, 7/8, 96, 97, 98, 26, 28, 30, 32
		BBB	1, 3, 7/8, 96, 97, 99, 27*, 95
		CCC	1, 3, 7/8, 96, 100, 95*

* Only portions of these links are included.

** Upon intersecting Link 68, the remaining distance to the new substation would be constructed as a double circuit line.

CAMEO-FRUITA CORRIDOR TALLY SHEET
CRITERIA: RESIDENTIAL AND OTHER PROPERTY
ALTERNATIVE CORRIDORS:

[illegible]

[illegible]

CAMEO-FRUITA LINK TALLY SHEET
CRITERIA: REMOVAL OF TREES

SUB-CRITERIA:
TREES REMOVED

[illegible][illegible]

SUB-CRITERIA:

NUMBER OF HUMES
VIEWING THE
TRANSMISSION LINE
AS A PROMINENT
VISUAL INTRUSION

CAPEO-FRUITA CORRIDOR TALLY SHEET

ALTERNATIVE CORRIDORS:

[illegible]

CAMEO-FRUITA LINK TALLY SHEET
CRITERIA: RECREATION

SUB-CRITERIA:		NUMBER OF		NUMBER OF	
		LINKS		LINKS	
		DEVELOPED PARK		DEVELOPED PARK	
		OR RECREATION		OR RECREATION	
		SPACE AREA		SPACE AREA	
LINK NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT
	10.0		5.0		TOTAL
1	0.0	1	5.0		5
2	0.0	0	0.0		0
3	0.0	0	0.0		0
7/8	0.0	0	0.0		0
11	0.0	0	0.0		0
12	0.0	0	0.0		0
13	0.0	0	0.0		0
15	0.0	0	0.0		0
16	0.0	0	0.0		0
17	0.0	0	0.0		0
18	0.0	0	0.0		0
19	0.0	0	0.0		0
20	0.0	0	0.0		0
21	0.0	0	0.0		0
22	0.0	0	0.0		0
23	0.0	0	0.0		0
24	0.0	0	0.0		0
25	0.0	0	0.0		0
26	0.0	0	0.0		0
27	0.0	0	0.0		0
28	0.0	0	0.0		0
29	0.0	0	0.0		0
30	0.0	0	0.0		0
31	0.0	0	0.0		0
32	0.0	0	0.0		0
33	0.0	0	0.0		0
34	0.0	0	0.0		0
35	0.0	0	0.0		0
36	0.0	0	0.0		0
37	0.0	0	0.0		0
38	0.0	0	0.0		0
39	0.0	0	0.0		0
40	0.0	0	0.0		0
41	0.0	0	0.0		0
42	0.0	0	0.0		0
43	0.0	0	0.0		0
44	0.0	0	0.0		0
45	0.0	0	0.0		0
46	0.0	0	0.0		0
47	0.0	0	0.0		0
48	0.0	0	0.0		0
49	0.0	0	0.0		0
50	0.0	0	0.0		0
51	0.0	0	0.0		0
52	0.0	0	0.0		0
53	0.0	0	0.0		0
54	0.0	0	0.0		0
55	0.0	0	0.0		0
56	0.0	0	0.0		0
57	0.0	0	0.0		0
58	0.0	0	0.0		0
59	0.0	0	0.0		0
60	0.0	0	0.0		0
61	0.0	0	0.0		0
62	0.0	0	0.0		0
63	0.0	0	0.0		0
64	0.0	0	0.0		0
65	0.0	0	0.0		0
66	0.0	0	0.0		0
67	0.0	0	0.0		0
68	0.0	0	0.0		0
69	0.0	0	0.0		0
70	0.0	0	0.0		0
71	0.0	0	0.0		0
72	0.0	0	0.0		0
73	0.0	0	0.0		0
74	0.0	0	0.0		0
75	0.0	0	0.0		0
76	0.0	0	0.0		0
77	0.0	0	0.0		0
78	0.0	0	0.0		0
79	0.0	0	0.0		0
80	0.0	0	0.0		0
81	0.0	0	0.0		0
82	0.0	0	0.0		0
83	0.0	0	0.0		0
84	0.0	0	0.0		0
85	0.0	0	0.0		0
86	0.0	0	0.0		0
87	0.0	0	0.0		0
88	0.0	0	0.0		0
89	0.0	0	0.0		0
90	0.0	0	0.0		0
91	0.0	0	0.0		0
92	0.0	0	0.0		0
93	0.0	0	0.0		0
94	0.0	0	0.0		0
95	0.0	0	0.0		0
96	0.0	0	0.0		0
97	0.0	0	0.0		0
98	0.0	0	0.0		0
99	0.0	0	0.0		0
100	0.0	0	0.0		0

CAMEO-FRUITA CORRIDOR TALLY SHEET
CRITERIA: RECREATION

ALTERNATIVE CORRIDORS:		NUMBER OF		NUMBER OF	
		LINKS		LINKS	
		DEVELOPED PARK		DEVELOPED PARK	
		OR RECREATION		OR RECREATION	
		SPACE AREA		SPACE AREA	
LINK NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT
	10.0		5.0		TOTAL
1	0.0	0	0.0		0
2	0.0	0	0.0		0
3	0.0	0	0.0		0
4	0.0	0	0.0		0
5	0.0	0	0.0		0
6	0.0	0	0.0		0
7	0.0	0	0.0		0
8	0.0	0	0.0		0
9	0.0	0	0.0		0
10	0.0	0	0.0		0
11	0.0	0	0.0		0
12	0.0	0	0.0		0
13	0.0	0	0.0		0
14	0.0	0	0.0		0
15	0.0	0	0.0		0
16	0.0	0	0.0		0
17	0.0	0	0.0		0
18	0.0	0	0.0		0
19	0.0	0	0.0		0
20	0.0	0	0.0		0
21	0.0	0	0.0		0
22	0.0	0	0.0		0
23	0.0	0	0.0		0
24	0.0	0	0.0		0
25	0.0	0	0.0		0
26	0.0	0	0.0		0
27	0.0	0	0.0		0
28	0.0	0	0.0		0
29	0.0	0	0.0		0
30	0.0	0	0.0		0
31	0.0	0	0.0		0
32	0.0	0	0.0		0
33	0.0	0	0.0		0
34	0.0	0	0.0		0
35	0.0	0	0.0		0
36	0.0	0	0.0		0
37	0.0	0	0.0		0
38	0.0	0	0.0		0
39	0.0	0	0.0		0
40	0.0	0	0.0		0
41	0.0	0	0.0		0
42	0.0	0	0.0		0
43	0.0	0	0.0		0
44	0.0	0	0.0		0
45	0.0	0	0.0		0
46	0.0	0	0.0		0
47	0.0	0	0.0		0
48	0.0	0	0.0		0
49	0.0	0	0.0		0
50	0.0	0	0.0		0
51	0.0	0	0.0		0
52	0.0	0	0.0		0
53	0.0	0	0.0		0
54	0.0	0	0.0		0
55	0.0	0	0.0		0
56	0.0	0	0.0		0
57	0.0	0	0.0		0
58	0.0	0	0.0		0
59	0.0	0	0.0		0
60	0.0	0	0.0		0
61	0.0	0	0.0		0
62	0.0	0	0.0		0
63	0.0	0	0.0		0
64	0.0	0	0.0		0
65	0.0	0	0.0		0
66	0.0	0	0.0		0
67	0.0	0	0.0		0
68	0.0	0	0.0		0
69	0.0	0	0.0		0
70	0.0	0	0.0		0
71	0.0	0	0.0		0
72	0.0	0	0.0		0
73	0.0	0	0.0		0
74	0.0	0	0.0		0
75	0.0	0	0.0		0
76	0.0	0	0.0		0
77	0.0	0	0.0		0
78	0.0	0	0.0		0
79	0.0	0	0.0		0
80	0.0	0	0.0		0
81	0.0	0	0.0		0
82	0.0	0	0.0		0
83	0.0	0	0.0		0
84	0.0	0	0.0		0
85	0.0	0	0.0		0
86	0.0	0	0.0		0
87	0.0	0	0.0		0
88	0.0	0	0.0		0
89	0.0	0	0.0		0
90	0.0	0	0.0		0
91	0.0	0	0.0		0
92	0.0	0	0.0		0
93	0.0	0	0.0		0
94	0.0	0	0.0		0
95	0.0	0	0.0		0
96	0.0	0	0.0		0
97	0.0	0	0.0		0
98	0.0	0	0.0		0
99	0.0	0	0.0		0
100	0.0	0	0.0		0

SUB-CRITERIA:

LAMEO-FRUITA CORRIDOR TALLY SHEET
RITERIA: BIOLOGICAL RESOURCES

[illegible]

CAMEO-FRUITA LINK TALLY SHEET
CRITERIA: PHYSICAL RESOURCES

Table A-2
Page 8 of 8

CAMEU-FRUITA CORRIDOR TALLY SHEET
CRITERIA: PHYSICAL RESOURCES

[illegible]

**Horizon-Fruita
Residential & Other Property**

NUMBER OF PARCELS CROSSED RESULTING IN SIGNIFICANT LAND USE IMITATIONS	NUMBER OF RESIDENCES AFFECTED BY ACQUISITION OF R.O.W.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

MILES OF
TRANSMISSION
LINE NOT
FOLLOWING
ESTABLISHED
R.O.W. (CANAL,
RR, ROAD, ETC.)

LINE	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	TOTAL
		10.0		1.0		5.0		2.0		5.0		5.0		5.0	
14	0	0.0	0	0.0	0	0.0	3	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6
24	0	0.0	0	0.0	0	0.0	2	4.0	1.0	5.0	4.0	1.0	5.0	1.0	12
30	0	0.0	0	0.0	0	0.0	6	12.0	0.1	0.0	0.0	0.0	0.0	0.0	12
32	0	0.0	0	0.0	0	0.0	1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2
33	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
34	0	0.0	0	0.0	1	5.0	3	6.0	1.5	7.5	0.0	0.0	0.0	0.0	19
37	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
38	0	0.0	0	0.0	0	0.0	1	14.0	0.0	0.0	0.0	0.0	0.0	0.0	14
40	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
41	0	0.0	0	0.0	0	0.0	3	6.0	0.6	3.0	0.0	0.0	0.0	0.0	19
42	0	0.0	0	0.0	0	0.0	6	12.0	0.0	0.0	0.0	0.0	0.0	0.0	12
43	0	0.0	0	0.0	0	0.0	1	2.0	0.5	2.5	0.0	0.0	0.0	0.0	10
44	0	0.0	0	0.0	0	0.0	5	10.0	1.5	7.5	0.0	0.0	0.0	0.0	5
45	0	0.0	0	0.0	0	0.0	2	4.0	0.2	1.0	0.0	0.0	0.0	0.0	18
47	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
48	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
49	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
50	0	0.0	0	0.0	0	0.0	9	18.0	0.5	2.5	0.0	0.0	0.0	0.0	5
51	0	0.0	0	0.0	0	0.0	0	0.0	0.9	4.5	0.0	0.0	0.0	0.0	21
54	0	0.0	0	0.0	1	5.0	0	0.0	0.2	1.0	0.0	0.0	0.0	0.0	0
55	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
56	0	0.0	0	0.0	0	0.0	0	0.0	0.7	8.7	0.0	0.0	0.0	0.0	0
57	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
58	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
59	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
60	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
61	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
62	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
63	0	0.0	0	0.0	2	10.0	1	2.0	0.0	1.0	0.0	0.0	0.0	0.0	1
64	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
65	0	0.0	0	0.0	0	0.0	4	8.0	2.7	13.5	0.0	0.0	0.0	0.0	12
66	0	0.0	0	0.0	0	0.0	0	0.0	0.6	3.0	0.0	0.0	0.0	0.0	23
67	0	0.0	0	0.0	0	0.0	1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2
68	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
69	0	0.0	0	0.0	1	5.0	0	0.0	1.3	6.5	0.0	0.0	0.0	0.0	12

ALTERNATIVE CORRIDORS:

[illegible]

Horizon-Fruita Biological Resources

[illegible]

Results of Alternative Analysis meo-Fruita Segment

Figure A.1 Revised

O-FRUITA SEGMENT RESULTS OF ALTERNATIVE ANALYSIS																									
CRITERIA	ALTERNATIVE CORRIDORS																								
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	
IDENTITY AND PROPERTY	TOTAL	16	28	24	42	27	29	27	29	10	28	29	29	24	42	27	45	30	32	27	45	32	39	12	
	RANK ORDER	4	11	8	19	10	11	10	11	1	11	11	11	8	19	10	20	12	13	10	20	13	17	2	
CULTURAL LANDS	TOTAL	101	141	51	86	103	106	93	96	106	141	106	96	51	86	57	92	109	112	57	92	112	106	97	
	RANK ORDER	14	20	7	12	15	15	13	14	15	20	15	14	7	12	8	13	16	16	8	13	16	15	14	
VAL OF TREES	TOTAL	20	70	20	70	140	170	60	90	20	70	170	90	20	70	60	110	180	210	60	110	210	160	50	
	RANK ORDER	1	4	1	4	9	11	3	5	1	4	11	5	1	4	3	7	12	14	3	7	14	10	3	
AL PROMINENCE HOMES	TOTAL	335	495	510	645	755	770	1095	1090	365	500	775	1095	515	650	715	850	940	955	720	855	960	1460	500	
	RANK ORDER	2	5	5	7	9	9	15	14	3	5	9	15	5	7	8	11	12	12	8	11	12	20	5	
AL CONFLICTS	TOTAL	211	211	226	226	218	208	231	231	211	216	213	236	226	231	221	221	223	213	221	226	218	201	211	
	RANK ORDER	11	11	15	15	13	10	16	16	11	12	12	18	15	16	14	14	14	12	14	15	13	8	11	
EATION AREAS	TOTAL	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	5	5	
	RANK ORDER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	20	20	20	20	20	20	1	1	
OGICAL RESOURCES	TOTAL	22	25	24	26	26	26	24	24	23	25	26	24	24	26	23	25	25	25	23	25	25	26	23	
	RANK ORDER	8	14	12	16	16	16	12	12	10	14	16	12	12	16	10	14	14	14	10	14	14	16	10	
ICAL RESOURCES	TOTAL	61	42	57	40	41	48	40	47	56	42	48	47	54	40	58	41	42	49	55	41	49	43	57	
	RANK ORDER	10	1	8	1	1	4	1	4	8	1	4	4	7	1	9	1	1	5	7	1	5	2	8	
OF RANKS		51	67	57	75	74	77	71	77	50	68	79	80	56	76	82	100	101	106	80	101	107	89	54	

ERIA	ALTERNATIVE CORRIDORS																											
	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	AAA	BBB	CCC
ENTIAL AND PROPERTY	TOTAL	16	28	24	42	27	29	27	29	10	28	29	29	24	42	27	45	30	32	27	45	32	39	16	26	37	42	42
	RANK ORDER	4	11	8	19	10	11	10	11	1	11	11	11	8	19	10	20	12	13	10	20	13	17	4	10	16	19	19
CULTURAL LANDS	TOTAL	101	141	51	86	103	106	93	96	106	141	106	96	51	86	57	92	109	112	57	92	112	106	101	75	31	26	8
	RANK ORDER	14	20	7	12	15	15	13	14	15	20	15	14	7	12	8	13	16	16	8	13	16	15	14	11	4	3	1
VAL OF TREES	TOTAL	20	70	20	70	140	170	60	90	20	70	170	90	20	70	60	110	180	210	60	110	210	160	20	270	310	110	40
	RANK ORDER	1	4	1	4	9	11	3	5	1	4	11	5	1	4	3	7	12	14	3	7	14	10	1	18	20	7	2
L PROMINENCE HOMES	TOTAL	335	495	510	645	755	770	1095	1090	365	500	775	1095	515	650	715	850	940	955	720	855	960	1460	335	405	780	230	295
	RANK ORDER	2	5	5	7	9	9	15	14	3	5	9	15	5	7	8	11	12	12	8	11	12	20	2	3	9	1	2
L CONFLICTS	TOTAL	222	222	237	237	229	219	242	242	222	227	224	247	237	242	232	232	234	224	232	237	229	212	171	211	211	221	221
	RANK ORDER	14	14	18	18	16	13	19	19	14	15	14	20	18	19	17	17	17	14	17	18	16	11	1	11	11	14	14
ATION AREAS	TOTAL	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	5	5	5	10	5	5
	RANK ORDER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	20	20	20	20	20	20	1	1	1	20	1	1
GICAL RESOURCES	TOTAL	18	21	20	22	22	22	20	20	19	21	22	20	20	22	19	21	21	21	19	21	21	22	28	23	24	23	23
	RANK ORDER	1	6	4	8	8	8	4	4	2	6	8	4	4	8	2	6	6	6	2	6	6	8	20	10	12	10	10
CAL RESOURCES	TOTAL	84	65	80	63	64	71	63	70	79	65	71	70	77	63	81	64	65	72	78	64	72	66	79	74	71	72	70
	RANK ORDER	20	12	19	11	11	15	11	14	18	12	15	14	17	11	19	11	12	15	18	11	15	12	18	16	15	15	14
OF RANKS		57	73	63	80	79	83	76	82	55	74	84	84	61	81	87	105	107	110	86	106	112	94	61	80	107	70	63

Results of Alternative Analysis Horizon-Fruta Segment

Figure A.2 Revised

CRITERIA	ALTERNATIVE CORRIDORS																	
		B	C	E	F	H	I	J	L	N	O	Q	R	T	U	W	X	Z
RESIDENTIAL AND OTHER PROPERTY	TOTAL	28	42	44	58	51	65	20	34	44	58	51	65	52	66	18	32	33
	RANK ORDER	3	7	8	12	10	14	1	5	8	12	10	14	10	14	1	4	5
AGRICULTURAL LANDS	TOTAL	104	134	118	148	88	118	0	30	121	151	91	121	83	113	5	35	119
	RANK ORDER	9	12	10	13	8	10	1	3	11	13	8	11	7	10	1	3	10
REMOVAL OF TREES	TOTAL	250	360	280	390	320	430	40	150	180	290	220	330	200	310	170	280	240
	RANK ORDER	10	14	11	16	13	17	1	5	7	11	8	13	7	12	6	11	9
VISUAL PROMINENCE FROM HOMES	TOTAL	2535	2050	2535	2070	2475	1990	1515	995	2705	2220	2595	2110	2500	2015	1470	950	2525
	RANK ORDER	13	10	13	10	13	10	7	3	14	11	14	11	13	10	6	3	13
VISUAL CONFLICTS	TOTAL	146	149	156	159	156	159	202	205	151	154	161	164	156	159	195	198	146
	RANK ORDER	11	12	13	13	13	13	20	20	12	13	14	14	13	13	19	19	11
RECREATION AREAS	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RANK ORDER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BIOLOGICAL RESOURCES	TOTAL	8	56	9	57	9	57	1	49	8	56	8	56	6	54	3	51	8
	RANK ORDER	3	16	3	17	3	17	1	14	3	16	3	16	2	16	1	15	3
PHYSICAL RESOURCES	TOTAL	2	15	14	27	4	17	4	17	15	28	5	18	3	16	9	22	5
	RANK ORDER	1	9	8	17	2	10	2	10	9	17	2	11	1	10	5	13	2
TOTAL OF RANKS		51	81	67	99	63	92	34	61	65	94	60	71	54	86	40	69	54

CRITERIA	ALTERNATIVE CORRIDORS																	
		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ
RESIDENTIAL AND OTHER PROPERTY	TOTAL	47	44	33	35	33	34	18	19	66	82	89	74	82	89	90	72	71
	RANK ORDER	9	8	5	5	5	5	1	1	14	18	20	16	18	20	20	15	15
AGRICULTURAL LANDS	TOTAL	149	5	10	5	13	5	8	0	223	237	207	124	240	210	202	129	238
	RANK ORDER	13	1	1	1	2	1	1	1	19	20	18	11	20	18	17	11	20
REMOVAL OF TREES	TOTAL	350	150	280	150	180	160	70	50	430	460	500	220	360	400	380	350	420
	RANK ORDER	14	5	11	5	7	6	2	1	17	19	20	8	14	16	15	14	17
VISUAL PROMINENCE FROM HOMES	TOTAL	2040	620	580	625	700	590	1590	1480	3455	3475	3395	2455	3625	3515	3420	2410	3445
	RANK ORDER	10	1	1	1	1	1	7	6	19	20	19	13	20	20	19	13	19
VISUAL CONFLICTS	TOTAL	149	165	156	163	161	161	200	200	76	86	86	146	81	91	86	139	76
	RANK ORDER	12	14	13	14	14	14	20	20	1	2	2	11	1	3	2	10	1
RECREATION AREAS	TOTAL	0	5	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0
	RANK ORDER	1	20	20	20	20	20	1	1	1	1	1	1	1	1	1	1	1
BIOLOGICAL RESOURCES	TOTAL	56	68	70	68	69	67	2	0	14	15	15	8	14	14	12	10	14
	RANK ORDER	16	20	20	20	20	20	1	1	4	5	5	3	4	4	4	3	4
PHYSICAL RESOURCES	TOTAL	18	27	32	27	33	31	10	8	2	14	4	4	15	5	3	9	5
	RANK ORDER	11	17	20	17	20	19	6	4	1	8	2	2	9	2	1	5	2
TOTAL OF RANKS		86	86	91	83	89	86	39	35	76	93	87	65	87	84	79	72	79

Appendix B
Route Evaluation Criteria

No changes or additions.

Announcement

Notice of Meeting

The Board of Directors of the City of [City Name] will meet on [Date] at [Time] in the [Location]. The meeting will be held in accordance with the provisions of the [City Charter/Ordinance]. The agenda for the meeting includes the following items:

- 1. Approval of the minutes of the previous meeting.
- 2. Report of the Mayor.
- 3. Report of the City Manager.
- 4. Presentation of the [Project Name] by [Name].
- 5. Public Hearing on the [Project Name].
- 6. Other business.

The public is invited to attend the meeting and to provide input on the [Project Name]. Input should be provided to the City Manager by [Date].

For more information, please contact the City Manager at [Phone Number] or visit the City Website at [Website URL].

Appendix C

Scoping Process and Public Involvement Supporting Information

Public Advertisement

Note that the following advertisement which appeared in the Draft EA now contains a note indicating that this ad also appeared in the Palisade newspaper.

Letters

Add the following letters to the end of Appendix C.

Appendix C
Scoping Process and Public Involvement Supporting Information

Public Advertisement

Note that the following advertisement which appeared in the Draft EA now contains a note indicating that this ad also appeared in the Redlands newspaper.

Letter

Add the following letter to the end of Appendix C.

Grand Junction Community Workshop

Public Service Co. of Colorado Proposed Grand Valley Transmission Line Upgrade Project

Wednesday, June 29, 7 p.m.

East Jr. High School
830 Gunnison Avenue

This is an informal meeting to discuss local concerns regarding the proposed 69,000-volt to 230,000-volt transmission system upgrade, and enable community members to comment on the criteria used in the selection of the substation sites and transmission corridors.



**Public
Service
Company
Colorado**

This ad appeared in the
Grand Junction Sentinel and
the Palisade Tribune.



CITY - COUNTY PLANNING

grand junction-mesa county 559 white ave. rm. 60 grand jct.,colo. 81501

(303) 244-1628

November 28, 1983

Mr. Larry Keith
Public Service Company
5909 E. 38th Avenue
Denver, CO 80207

Dear Mr. Keith:

The Grand Junction Planning Commission has reviewed the latest information on the Grand Junction transmission line siting study and is in receipt of the Mesa County Planning Department's letter to you, dated November 21, 1983. We have concerns about some points raised in the letter and would like to clarify our position and recommendation.

Please understand that we make these comments as the Grand Junction Planning Commission, and that Ray Gronwall should continue to be the key staff contact person for this study.

1. The Planning Commission is opposed to the siting of a high voltage transmission line along the Colorado River (links 60, 66, 69 and links 77a and b). We do not believe that a transmission line and a river greenbelt are compatible uses. In fact, the existence of such a line may jeopardize the future creation of a possible Greenbelt Park.

We also feel that placement of facilities of this type in an identified floodplain and gravel resource area is not proper planning, especially in light of the 1983 flooding event.

2. From the information available at the present stage of study, we feel that the railroad alignment (links 58, 59, 61, 62, 68 and link 72) is the preferred choice. This alignment should not have more significant visual impacts than the river route and may, in fact, have lesser overall visual impacts due to the height and spacing of the poles. The railroad route would also have less environmental impacts, not be subject to flooding hazards, and preserve the integrity of a future river

Letter to Mr. Larry Keith, Public Service Co.

November 28, 1983

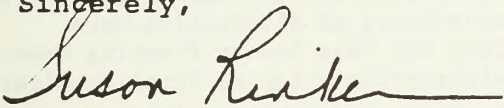
Page 2

greenbelt system. Since the railroad and its parallel roadways already constitute a significant transportation corridor, it seems logical to use that corridor rather than creating a new one.

3. Ownership along the river is broken into numerous medium to small parcels. This would make it more difficult and expensive to purchase easements or rights-of-way. Given all other factors being equal, the most cost effective approach would be preferable since the costs are ultimately borne by the consumer.
4. We wish to compliment Public Service and EDAW, Inc., on the intensive efforts put into this study. We believe the methodology addresses major concerns in as objective a manner as possible. The unavoidable subjective concerns seem well treated.

Thank you for allowing us the opportunity to express our concerns.

Sincerely,



Susan Rinker, Chairperson
Grand Junction Planning Commission

mm

xc: Jim Wysocki
Ray Gronwall
Julie Dougan



CITY - COUNTY PLANNING

grand junction-mesa county 559 white ave. rm. 60 grand jct.,colo. 81501

(303) 244-1628

May 24, 1984

Bureau of Land Management
Julia Dougan
764 Horizon Drive
Grand Junction CO 81501

Dear Julia:

Thank you for the opportunity to discuss the various alternative routes proposed for the Public Service Company's proposed 230 KV transmission line. During the review of the proposed routes the members of the Planning Commission discussed a new route. This route would minimize the impact to some of Mesa County's most valuable and productive agricultural land. Policy #17 from the Mesa County Land Use and Development Policies states the importance of agriculture to Mesa County. The policy also states common agricultural practices will be honored. This policy necessitates an alternative more amenable to agricultural land uses. Therefore the Mesa County Planning Commission requests that you consider another alternative prior to Final Publication of the Environmental Assessment.

We recommend a corridor similar to alternative A, AA, WW that will follow the northern edge of the Highline Canal through BLM managed property to Big Salt Wash. The corridor would then track southwest adjacent to Big Salt Wash to Fruita, then follow alternative route V, LL to the new Fruita Substation.

We appreciate your consideration of this route at such a late date in the process.

Sincerely.

Paul Nelson, Vice-Chairman
Mesa County Planning Commission

xc: Larry Keith	Gordon Tiffany
Ray Gronwal	Keith Messinger
George White	Robert Gobbo
Carlo Landini	Errol Snyder

NOTIFICATION
MESA COUNTY PLANNING COMMISSION

MAY 29 1984

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Appendices D through G

No changes or additions.



CITY COUNTY PLANNER

2001-2002

Page 1

Dear Mr. [Name]

Enclosed for you are the [documents]
[documents]
[documents]
[documents]

Sincerely,

[The following text is extremely faint and largely illegible. It appears to be a multi-paragraph letter discussing planning matters, possibly related to the 2001-2002 period mentioned in the header. It may include details about a meeting, a report, or a specific project.]

[The following text is extremely faint and largely illegible. It appears to be a paragraph, possibly a closing or a specific point in the letter.]

[The following text is extremely faint and largely illegible. It appears to be a paragraph, possibly a closing or a specific point in the letter.]

Respectfully,

[Signature]

[Name]
[Title]

[Address]
[City, State, Zip]
[Phone Number]
[Email Address]

[Faint text, possibly a date or reference number]

**Public Comments and
Responses**

Letter A

Audubon Society of
Western Colorado, Inc.

P.O. Box 1211
Grand Junction, Colorado 81501

Ms. Julia Dougan
Bureau of Land Management
764 Horizon Drive
Grand Junction CO 81501

Dear Ms. Dougan:

The Audubon Society of Western Colorado would like to submit the following comments in response to the Grand Junction Conversion Transmission Line Project Environmental Assessment.

1 Both our 200 member local chapter and the Audubon Society nationally strive to protect wildlife, wetlands and wild places. We must, therefore, oppose alternative BB of the Horizon-Fruita Segment because of its threat to waterfowl using the Walker Wildlife Management Area and the Colorado River. We share the concerns of the Division of Wildlife and the U.S. Fish and Wildlife Service. The reach from Walker Wildlife Management Area to Rhone Bend in the Colorado River is a high use waterfowl area and collisions with wires by birds would be inevitable. The recent injury of an endangered whooping crane near Whitewater, Colorado, which has been attributed to a powerline, should demonstrate that the concern for waterfowl injuries is not contrived. Waterfowl are protected under provisions of the Migratory Bird Treaty Act; it is possible that Public Service Company could be held liable for bird mortality caused by their powerline.

We believe that the railroad corridor is the obvious and better choice for the powerline right-of-way, rather than alternative BB. The powerline can hardly be thought of as a significant intrusion when Highway 6 & 50, the railroad and I-70 already separate Fruita from housing to the south. It is our feeling that if the public were better informed and opinion were better assessed, the railroad corridor would receive greater support.

2 Although engineers may prefer the simplicity of routing rights-of-way through open and undeveloped lands, we find this philosophy unacceptable, if there is any merit to less intrusive alternatives. We therefore recommend reconsideration of alternatives 101, 102, 107 and 108 as logical routes for the Cameo-Fruita Segment, because they follow existing powerline routes. In those areas where these alternatives would interfere with airport expansion or scenic vistas, we suggest that redesigning (perhaps underground) or locally rerouting the line be seriously investigated.

3 Our chapter enjoys field trips to observe waterfowl and other birds along the Colorado River. The sighting of a bald eagle or the sight and sounds of a flock of sandhill cranes flying over are always a special moment, to either the experience birder or a newcomer. The value of the Colorado River corridor to wildlife, its value to man as a scenic retreat and urban surroundings, and the value which many people place on unobstructed vistas in the Little Bookcliffs Wild Horse Area and the desert north of Grand Junction would all be compromised to some degree by this Public Service Company project. For these reasons, we urge that more consideration be given to the use of existing rights-of-way. In the event of opening new rights-of-way across undeveloped land, we request an environmental impact statement for these affected public lands.

Sincerely yours,

(Signature)

Jeanne T. Hemphill
Conservation Chair

Response

Audubon Society (Hemphill)

1. The proposed action for the Horizon-Fruita segment has been changed from Alternative BB to Alternative J, which parallels the railroad right-of-way.
2. Please note the discussion of underground construction on Pages 2-2 and 2-3 in the DEA. Underground construction of a 230-kV line is not currently feasible for the distance required to avoid conflicts with Walker Field along Alternatives 107 and 108. Wildlife was a primary consideration in the decision to reject Alternatives 101 and 102 early in the study process. Each of these alternatives would involve closely paralleling the Colorado River for approximately four miles, and each alternative would also require two crossings of the river. Because of the high value of riparian habitat, every attempt was made to minimize conflicts with these areas during the siting process. Of more importance than the short-term construction impacts is the potential for waterfowl collisions with the transmission line throughout the life of the project. The alternatives in the Book Cliffs present a conflict with wildlife primarily only during construction. By observing the no construction periods in this area (See Table 2-9) and other mitigations, such as helicopter construction, few wildlife and/or habitat impacts are anticipated in the Book Cliffs. As indicated in the EA, there are significant visual and land use conflicts along Alternatives 101 and 102 which, in conjunction with the higher wildlife conflicts in this area, caused these routes to be rejected early in the study process.
3. An important objective in the route development process was the utilization of existing corridors. The system of alternative study corridors reflects that this has been done wherever possible. All alternatives indicated on Figure 2-1 were evaluated in the same manner and to the same degree. Where the proposed line would parallel or replace an existing line, it was recognized that the effects are sometimes less than the effects of creating a new corridor. In other instances where the existing line had been poorly sited or development had built up since it was first sited, the impacts of using an existing corridor could be greater than those associated with creating a new corridor.
4. The BLM recognizes three levels of environmental documentation: an EA, a Comprehensive EA, and an EIS. This document is a Comprehensive EA and shows that the project would not have any significant impacts. The technical analysis done for this study was of EIS detail, but has not shown anything to indicate that an EIS is warranted or that it would lead to any different conclusions.

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APR 15 1984

GRAND JUNCTION RESOURCE AREA
GRAND JUNCTION, COLORADOJulia Dargatz
R. L. M. Office

April 9th 1984

Clark

1. The purpose of the detailed routing study described in the DEA is to identify potential conflicts in order to select a route that minimizes, to the greatest extent possible, environmental and land use conflicts. All reasonable mitigation will be applied to further reduce the adverse effects which do occur. In no cases will agricultural land be ruined by this project. Under a worst case scenario, transmission towers for the entire project would take 0.51 acres out of production. PSCC recognizes that in addition to this, the transmission line may interfere with the efficiency of farming operations. As indicated in the DEA, PSCC will fairly compensate farmers for all crop loss and reduced productivity. PSCC will purchase easement rights for the purpose of constructing and operating the transmission line only. The fee ownership will remain with the individual landowner, and farming operations may continue on this land.

Alternative routes have been investigated to the south along I Road. The I Road corridor has proven unfeasible due to conflicts with the Walker Field expansion. For additional information on this route, see the discussion of Alternative 119 in Chapter 2 of the FEA.

Why allow Public Service Co. to run big power lines through some of the best farm land left in the valley. A few years ago the Interstate Highway cut down through a lot of good farm land and each year having subdivisions take out acres of station land from the valley and now Public Service wants to ruin what's left.

We very much object to the M. Road proposal especially, as it would affect our home and make farming and crop spraying very difficult.

Why don't Public Service Co. just upgrade their existing lines down where the heavy population is and stay out of our rural area.

Sincerely
Harold & Elaine Clark

STATE OF COLORADO

Richard D. Lamm, Governor

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WILDLIFE

Jack R. Grieb, Director

6060 Broadway

Denver, Colorado 80218 (325-1192)

711 Independent Avenue

Grand Junction, CO 81505



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APR 25 1984

GRAND JUNCTION

Julia Dougan

Bureau of Land Management

Grand Junction Resource Area

764 Horizon Drive

Grand Junction, CO 81501

April 24, 1984

RE: Draft Environmental Assessment: Grand
Junction Conversion Transmission Line Project

Dear Ms. Dougan:

Personnel from the Colorado Division of Wildlife have reviewed the referenced document and we submit the following comments:

General Comments

1 Horizon - Fruita Segment

The proposed alternative, Alternative BB, would have the greatest adverse biological and recreational impacts and we recommend against the implementation of this alternative. The Colorado River has many unique values not found elsewhere in the Grand Valley that provide recreation, aesthetics, and a diverse array of plant and animal life. Character of an area should be considered when evaluating alternative criteria and trade-offs of impacts. Along this segment, we feel biological and recreational impacts are more detrimental than visual impacts. The visual impact may be relatively minor for many of the homes that would be impacted by "evident visual intrusion" for Alternatives J and B. Also for Alternatives J and B, views of two of the most prominent scenic features along this segment (Colorado National Monument and Colorado River) would be undisturbed to the major highway corridor (I-70).

We oppose the proposed crossing of Walker State Wildlife Area (WSWA). Our reasons are:

- 1) A major consideration for reducing bird mortalities from collisions with powerlines is to avoid routing powerlines over bird concentration areas. (Fish and Wildlife Service 1978, Beaulaurier 1981, Anderson 1978). WSWA is the largest migratory waterfowl concentration area on the Colorado River in the Grand Valley area. There are alternative powerline routes to going over WSWA.
- 2) The proposed powerlines would adversely impact WSWA aesthetically, reducing public enjoyment of the area. Over \$100,000. will be spent on improvements at WSWA in 1984. Plans include construction of nature trails and blinds for viewing wildlife.
- 3) The proposed powerlines at WSWA could cause bald eagle mortalities. We have observed as many as five bald eagles at WSWA at one time. We feel the waterfowl concentrations attract feeding bald eagles. Kroodsmo (1978) observed the potential for bald eagle collisions with powerlines increases when these birds are in pursuit of prey and may be distracted.
- 4) There are some indications that wildlife use of habitats below powerlines is less than in surrounding habitats. In a report by Willidan Associates (1982) researchers noticed that waterfowl used habitat underneath and adjacent to a transmission line less after construction of the line. We have made a similar observation at a powerline substation near Basalt, Colorado. Such a disturbance would be unacceptable to us at WSWA. More research on this subject is necessary and should be required before any approvals are given to crossing WSWA with powerlines.

CDOW (Elmblad)

1. Your concerns have been noted. The proposed action for the Horizon-Fruita segment has been changed to Alternative J.

Letter C Cont.

2 If Alternative B8 is selected as the final preferred alternative, the proposed WSWA crossing should be relocated outside the refuge boundary and as far away as possible. The groundline and conductors at this river crossing and at the river crossing south of Fruita should be marked. Also at these crossings the conductors should be strung in a plane that is parallel to the river rather than vertical to the river. We recommend that the proponents be required to coordinate further with us on these mitigation measures.

3 Cameo - Fruita Segment

We recommend against Alternative A, F, V. This route goes through a designated wild horse area, critical mule deer winter range, and good chukar partridge habitat. Most of the area is also relatively pristine. If this alternative is chosen as the final preferred alternative, timing restrictions for construction activities should be imposed to avoid conflicts with wintering mule deer, wild horse foaling, and chukar and raptor nesting. The proponents should be required to coordinate with us on specific dates for the timing restrictions.

4 Grand Junction - Clifton - Colorado Ute Segment

We recommend against Alternative L because of the potential for waterfowl moving along the Gunnison River to collide with powerlines at the four proposed river crossings. However, if Alternatives L or J are selected as the final preferred alternative, the mitigation measures mentioned previously for marking and stringing wires at river crossings should be required. Proponents should coordinate this with us.

5 Raptor Protection

Transmission lines and towers should be designed to minimize the potential for electrocuting raptors. Eagles and other raptors frequently perch on transmission line poles and consequently are likely to become electrocution victims. Guidelines for protecting raptors are provided in: Suggested Practices for Raptor Protection on Powerlines - The State of the Art - 1981; Raptor Research Report #4, Raptor Research Foundation, Inc. 1981. Copies of this report may be obtained from the Raptor Research Foundation, c/o Department of Veterinary Biology, University of Minnesota, St. Paul, Minnesota 55101.

Specific Comments

6 Summary Comparison of Alternatives, Horizon-Fruita Segment, Pg. 5-6, Paragraph 1, Sentence 2

We feel that biological impacts will also result from crossing WSWA or "Walker Wildlife Management Area".

7 Chapter II, Table 2-1, Corridor Evaluation Criteria, Page 2 of 3, Biological Resources

Add a criteria for areas of special biological importance, such as WSWA. This criteria should be weighted a 10.

8 Chapter III, C. Biological Resources, 2. Wildlife, Page 3-7, Pinyon/Juniper

Add mountain lions to the list of mammals.

9 Figure 3-4, Biologically Sensitive Areas

Add waterfowl concentration areas; i.e. WSWA to this diagram. Also, add waterfowl wintering areas and migration corridors. Waterfowl winter and migrate along the entire reaches of the Colorado and Gunnison Rivers in the project area.

Important waterfowl habitats should be illustrated on this map because waterfowl are economically important and valuable to both consumptive and non-consumptive users. Waterfowl occur in the Grand Valley area in large numbers in fall, winter, and spring seasons. We feel the potential for waterfowl collisions with powerlines is enhanced in the project area due to the frequent air inversions that occur in fall and winter and greatly reduce visibility along the rivers. We also feel the total number of waterfowl that could be killed by powerline collisions during the life of the project could be substantial.

Response

2. Except for marking the conductors, these measures have been adopted as part of the DEA. PSCC will coordinate with CDOW.
3. We acknowledge your comments. See mitigation measures #21 and #29 in Table 2-9 of the DEA. PSCC will coordinate with CDOW during the construction of this project.
4. PSCC will continue to coordinate with CDOW.
5. No electrocution hazards will result from this project. See Page 4-3 of the DEA.
6. Proper reference is Page 5-6. This sentence has been modified.
7. Impacts to the WSWA have been accounted for in the biological resources criteria as crossing a bald eagle winter concentration area. This factor has a weighting of 10.
8. This species has been added.
9. It was recognized throughout the analysis that the "Major Riparian and Aquatic Habitat" zone mapped on Figure 3-4 contained a variety of potential conflicts with a transmission line among which was considered the heavy use of this area by waterfowl.

10 Chapter III, D. Land Use, 7. Land Ownership, Page 3-14, Paragraph 3, Sentence 2
The Colorado Division of Wildlife land at WSWA is also in public ownership.

11 Chapter III, F. Visual Resources
WSWA is a valuable visual resource located in an urban setting. It should be described in this section. Within this 441 acre wildlife area, there are riverine, lacustrine, and riparian ecosystems. Seventeen species of amphibians, 35 species of mammals, and 180 species of birds occur in the area.

12 Chapter IV, D. Horizon-Fruit Segment, 1. Proposed Alternative, E. Visual Resources, Page 4-20

Add a statement on the adverse visual impact of powerlines over WSWA. We feel powerlines are incompatible with the other values in a nature area.

13 Appendix B, G. Biological Resources, Page B-6
Add areas of special biological importance to the list of criteria with the highest penalty (10).

We appreciate the opportunity to provide comments on this proposal.

Sincerely,

William R. Elmbad

William R. Elmbad
Wildlife Biologist

WRE:ch

xc: Perry D. Olson
Pete Barrows
Jack Leslie
Lisa Evans
Joe Gumber
File

Literature Cited

- Anderson, W. L. 1978. Waterfowl Collisions with Power Lines at a Coal-fired Power Plant. Wildl. Soc. Bull. 6: 77-83.
- Beaulaurier, Diane L. 1981. Mitigation of Bird Collisions with Transmission Lines. Report prepared for Bonneville Power Administration, Portland, Oregon. Western Interstate Commission for Higher Education, Boulder, Colorado. 83 pp.
- Fish and Wildlife Service. 1978. Impacts of Transmission Lines on Birds in Flight. Proceedings of a Workshop. Edited by M. L. Avery. Oak Ridge Associated Universities, Oak Ridge, Tennessee. 151 pp. (See Work Group: Mitigation, pages 110-117.
- Kroodsma, R. L. 1978. Evaluation of a proposed transmission line's impacts on waterfowl and eagles. In: Impacts of transmission lines on birds in flight. M. L. Avery (ed.). U.S. Fish and Wildlife Service, Biological Services Program, Washington, D.C. pp. 69-76.
- Willdan Associates, Portland, Oregon. 1982. Impact of the Ashe-Slatt 500-KV Transmission Line on Birds at Crow Butte Island: Post construction Study Final Report. Prepared for Bonneville Power Administration, Portland, Oregon. 111 pp.

10. Alternative B3 would cross approximately 0.15 mile of public land at the WSWA. As noted earlier, the proposed action (Alternative J) would not cross WSWA.
11. The scenic value of the WSWA is acknowledged and the narrative has been modified in Chapter III of the FEA to state this more directly.
12. This was addressed on Page 4-21 of the DEA.
13. The existing criteria cover all such areas. In the case of the WSWA it was given the highest possible weight of 10 for being a bald eagle winter concentration area.

Letter D



2239 E Colfax Ave Denver, CO 80206

colorado
open
space
council
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APR 2 1984
GRAND JUNCTION RESOURCE AREA
393-04 GRAND JUNCTION, COLORADO

Western Colorado Office
P.O. Box 204
Grand Junction, CO 81502
(303) 245-1191

April 25, 1984

Ms. Julia Dougan
BLM, Grand Junction RA
764 Horizon Dr.
Grand Junction, CO 81501

Dear Ms. Dougan:

Please accept these comments on the draft EA for the "Grand Junction Conversion Transmission Line Project."

I have two major concerns with the preferred route.

1 (1) It is totally unacceptable to route the powerline through the Walker Wildlife Refuge. This is the only wildlife refuge in the Grand Valley. It is visited by a number of endangered species, including bald eagles and whooping cranes. Upwards of 10,000 waterfowl have been counted there during Audubon bird counts. Public Service could not have picked a worse location routing the line in the entire valley.

Instead of posing such a great danger to waterfowl and other birds, the line should be routed along the railroad corridor from Fruita to Grand Junction.

2 (2) The route through the Bookcliffs is somewhat unfortunate with so many of the drainages in the Bookcliffs heavily impacted by development, it would seem desirable to avoid creating new corridors. While at first glance, the preferred route appeared a good trade-off in that it removed a severe visual impact from the front of Mt. Garfield, upon reconsideration the new corridor up Coal Canyon creates more problems than it solves. The Grand Valley Rural Powerlines line north of I-70 below Mt. Garfield is a major impact by itself; removing the PSC line alone will not appreciably improve the visual character of the area.

3 Considering the substantial impacts to endangered species and waterfowl due to routing the powerline through Walker Wildlife Refuge, BLM should consider a decision notice requiring a complete EIS. Public hearings would also be in order.

Sincerely,

Mark Pearson

Mark Pearson
COSC staff

Response

COSC (Pearson)

1. The proposed action has been changed from Alternative BB (through Walker Wildlife Area) to Alternative J (along the railroad corridor).
2. For clarification, refer to Figure 3-7 in the DEA. The PSCC line that would be removed crosses the face of the Book Cliffs, then parallels the base of the Cliffs adjacent to I-70 for approximately three quarters of a mile. The Grand Valley line is approximately three quarters of a mile away from the base of the Book Cliffs at its nearest point, and directly adjacent to I-70 for only a very short distance.
3. The proposed action has been changed from Alternative BB (through Walker Wildlife Area) to Alternative J (along the railroad corridor).

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APR 13 1984
GRAND JUNCTION RESOURCE AREA
GRAND JUNCTION, COLORADO

Patricia Fennell

1. Your concerns have been noted. Please refer to the discussion of these issues on Pages 3-9, 4-3, and 4-4 of the DEA.

To whom it may concern,

I wish to express my complete disapproval of the proposed changes in the power lines running through the Little Bookcliff Wild Horse Range. As a frequent observer on the range, I have seen the problems caused by disruption to the habitat. The noise and disturbance caused by construction causes considerable stress to the wild animals existing on the range. The horses confined to the range and the wild life that frequent it exist in a very delicate balance with nature for their survival. Any disturbance can cause damage that takes years to repair. Since there are alternatives available for the power line I am completely opposed to the use of any area other than the spade occupied by the existing lines.

Sincerely,
Patricia Fennell
2074 Broadway
Grand Junction, CO 81503

Letter F



FRIENDS OF THE EARTH

NEW ADDRESS:
P.O. Box 728
Palisade, CO 81526
464-5329

Ms. Julia Dougan
BLM, Grand Junction Resource Area
764 Horizon Dr.
Grand Junction, CO 81501

Dear Ms. Dougan:

The following comments are submitted in response to the draft environmental assessment for the "Grand Junction Conversion Transmission Line Project," on behalf of Friends of the Earth. The problems which the Two Rivers Citizens Association raised in regards to the proposed project during the June, 1983 meeting with Public Service Co. have not been sufficiently addressed in the EA. (I was a participant in that meeting, and Friends of the Earth has similar concerns.) Furthermore, in reviewing the EA itself, it was quite apparent that the level and types of impacts which would be created by the transmission line project are not adequately addressed in the EA. In fact, the impacts and alternatives may be extensive and complex enough to require an environmental impact statement.

The following are some of the specific deficiencies which we noted in the EA:

- 1) The purpose and need section is inadequate. The definition and description of the anticipated need is justified by including a few charts without references or calculations as to how PSC determined the growth scenarios (whose population assumptions?) or load projections. We recommend an analysis of the anticipated problems, both current and future, which PSC has to meet, accompanied by an analysis of whether the proposed upgrading meets those needs. The need for the upgrading to a 230 KV line was one of the major concerns expressed at the meeting with the Two Rivers Association. The response from PSC was that they would be analyzing the need for upgrading in their certificate of necessity application to the Public Utilities Commission. and that TRCA would have an opportunity for comment at that time. However, PSC neglected to provide TRCA with a copy of the application, a notice of the PUC hearing, or a local hearing to ensure our comments. This neglect, combined with the inadequacy of the EA, has effectively stifled any public opportunity to comment on the need for the project. Either a greatly expanded final EA or an EIS will have to be done in order to incorporate public comment on this issue.
- 2) The section on alternate systems is similarly deficient. All of the alternate systems were dismissed using technical language with no comparison or analysis of alternatives. CASE IV particularly needs more analysis. Again, this type of comparison and analysis is best done in an EIS.
- 3) Potential public health hazards from high-voltage transmission lines were another issue brought up at the TRCA and PSC meeting; this issue was dismissed without documentation in one paragraph in the EA.

Colorado West Office, 530 Main St., Grand Junction, Colorado 81501, (303) 245-7047

Response

Friends of the Earth (Albrecht)

1. Public Service Company's method of planning is described in Chapter 1, Pages 1-1 through 1-5 of the Draft Environmental Assessment. The need for Public Service Company's facilities is regulated by the Colorado Public Utilities Commission as the legally authorized agency to review and act on such activities. Public Service Company did not provide TRCA with a copy of the application because of Public Service Company's assumption, following the June 9, 1983, meeting, that TRCA and FOE would make their interest in this project known to the PUC. The PUC gave notice on October 4, 1983, to all interested persons, firms, and corporations. The Grand Junction Mesa County Planning Department, Fruita, and Palisade were notified of the proceedings by PSCC on October 4, 1983.

The public has had the opportunity to comment throughout this project at public workshops held on June 28, 29, and 30, 1983; at scoping meetings conducted by the BLM on October 4, 5, and 6, 1983; requests by advertising in local newspapers ("We Want to Hear from You" and What's Your Opinion") in August and September 1983; at a joint public meeting with the Grand Junction and Mesa County Planning Commissions on October 26, 1983; and at a public meeting held with the Fruita City Council on November 7, 1983. Two public meetings were also conducted by the BLM on April 3, 1984, to receive comments on the Draft EA. The Draft EA was submitted to the BLM on March 20, 1984, and the public comment period ran through April 25, 1984. Refer to Chapter 1, Pages 1-6 through 1-8 and Appendix C of the Draft EA.
2. Alternate Transmission Technologies/Systems are addressed in Chapter 2, Pages 2-1 through 2-6 of the DEA. This includes discussion regarding the environmental impacts as compared to the proposed action. The alternate transmission technologies/systems were dismissed because of prohibitive costs and increased environmental impacts. Case IV - conversion of the existing 69-kV system to 115-kV was rejected because the project need would only be satisfied through 1990, which would require a similar upgrade project at that time. This would result in at least twice the land use and environmental impacts of construction, dismantling, and reconstruction in the same time frame proposed for this project. It would also involve an irresponsible expenditure of money, as electric systems should provide for approximately 20 years growth. PSCC is regulated by the PUC and charged with providing electric power in the most cost efficient and effective manner. The impacts of a 115-kV system would be almost identical to those of a 230-kV system. The only differences would be a minor reduction of the height of the equipment and right-of-way requirements.
3. Please note that electrical effects regarding the potential for public health hazards are discussed in Chapter 4, Page 4-44 to 4-46 of the Draft EA. Numerous studies and public hearings have been conducted concerning the effects of high voltage electrical fields. The recurring conclusion has been that there is no evidence of biological effects associated with such fields.

The majority of these reports and hearings have involved voltages much higher than the voltage of the proposed facilities. A sample list of references follows:
 - o "Medical Evaluation of Man Working in AC Electrical Fields", W.R.K. Kouwenhoven, Fellow IEEE, O.R. Langworthy, M.L. Singewald, and G.G. Knickerbocker, Member IEEE, IEEE Transactions on Power Apparatus and Systems, Volume PAS-86, No. 4, April, 1967.
 - o Paper T73 154-2, "Medical Follow-up Study of High Voltage Linemen Working in AC Electric Fields", M.L. Singewald, M.D., O.R. Langworthy, M.D., W.B. Kouwenhoven, Dr. Ingr, M.D. (Hon.), Fellow IEEE, the John Hopkins University, manuscript submitted September 29, 1972, made avc for pi Nove 30, 1973

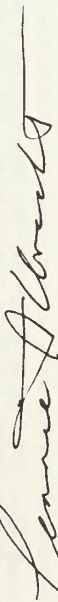
4) The affected environment and environmental consequences sections exhibited a great deal of in-depth, comparative, technical analysis of the different corridor options. Unfortunately the narrative is often quite truncated, particularly in the comparison of alternatives. The narrative also neglects to give references to maps which occur elsewhere in document, constantly refers to links, and provides no comparative summary of the pros and cons of different corridors. In some cases, establishing the powerline along a current corridor or right-of-way is chosen, and in other cases, new corridor segments would be established. Justification for these choices is not clearly or consistently executed in the EA. For example, why is the proposed alternative for the Fruita-headlands segment run along the Colorado River, and through the Walker Wildlife Refuge, rather than utilizing the current highway/railroad corridor? Or was any attempt made in the proposed Cameo to Fruita segment to follow existing ELM right-of-ways for gas lines, etc.?

5) In addition to visual resources issues the proposed action would clearly affect other public resources, ie. ELM lands and the Walter Walker Wildlife Refuge. Crossing the refuge, with the consequent impact on a variety of wildlife plus the bald eagle, an endangered species, is totally unacceptable to Friends of the Earth. And given the large amounts of ELM lands involved in the proposed action and some of the alternatives, the EA does not thoroughly analyze either the short-term or the long-term impacts to public lands; public lands users; or other resources on the lands. A number of projects with far less impact on public lands have required an EIS.

6) Lastly, a number of other groups, including Grand Valley Rural Power, have taken issue with the proposed action. Given the number of protests, the complexity of issues, the potential impact on public lands, and the lack of formal public hearings prior to the EA, the ELM should seriously consider requiring that PSC commence the process for an environmental impact statement.

Thank you for the opportunity to comment.

Sincerely,



Bonnie Albrecht
Colorado West Representative

- o "Long Term Exposure to Electric Fields a Cross-Sectional Epidemiologic Investigation of Occupationally Exposed Workers in High Voltage Substations", by B. Knave, M.D., F. Gomberale, Ph.D., S. Bergstrom, E.E., E. Birke, M. Sc., A. Iregren, M. Sc., B. Kolmodin-Hedman, M.D., and A. Wenneberg, M.D. (Sweden), paper submitted to Study Committee 36 (Interference) and published at the request of the Chairman of the Committee, Mr. A.J. Personen, Electra, No. 65.
- o "Excerpts From a Report to the Canadian Electrical Association Research and Development Department, Research Contract #78-89".
- o "High Voltage Overhead", by Morton W. Miller and Gary E. Kaufman, Environment, Volume 20, No. 1, January/February, 1978.
- o "Excerpts, State of New York Public Service Commission, Cases 26529 and 26559 Recommended Decision of the Administrative Law Judges on the Health and Safety Effects of 765-kV Transmission Lines (Combined Record Proceeding)", recommended decision by Administrative Law Judges Thomas R. Matias and Harold L. Colbeth, January 16, 1978.
- o "Analysis of Health Risks Associated with High Voltage Transmission Lines", by Sol M. Michaelson.
- o "Review of Developments in Determining the Influence of Power Frequency Electric Fields on Biological Systems", EPRI, EA-1123, Vol. 1.

4. The DEA contains a summary comparison of alternatives (Summary, Pages S-3 to S-8), a more detailed comparison of these alternatives in Chapter II (Pages 2-6 to 2-18), a discipline-by-discipline discussion of impacts of the primary alternatives in Chapter IV (Pages 4-1 to 4-39), and 28 pages of detailed numerical accounting of results for all alternatives in Appendix A on a link-by-link, route-by-route and discipline-by-discipline basis. The study process and criteria are similarly discussed repeatedly throughout the document. Maps are always referenced where first introduced. There is also a List of Figures immediately following the Table of Contents wherein all maps and their location in the report are referenced.

The basis for the selection of Alternative BB (Colorado River route) was discussed on Pages S-6 and 2-11, 2-12 of the DEA. The proposed action has been changed back to Alternative J (railroad route) because of public and agency comments which are nearly unanimous in recommending use of the railroad route.

5. Short-term and long-term effects of the project are presented in narrative and summary table form in Section IV.J. of the DEA, and are organized on a discipline-by-discipline basis.

6. There have been a large number of well advertised formal public workshops and hearings throughout the year-long course of the study. Refer to Pages 1-6 to 1-8 of the DEA which describe the scoping and public involvement process.

The BLM recognizes three levels of environmental documentation: an EA, a comprehensive EA and an EIS. This document is a comprehensive EA; but in fact it meets all technical analysis requirements of an EIS as prescribed in NEPA, CEQ and the BLM Environmental Handbook. The objective of an EA is to determine whether an EIS is necessary. The technical analysis done for this study was of EIS detail but has not shown anything to indicate that an EIS is warranted or that it would lead to any different conclusions.

Letter G



CITY - COUNTY PLANNING

grand junction-mesa county 559 white ave. rm. 60 grand junction, colorado 81501
(303) 244-1628

Ms. Julia Dougan
Bureau of Land Management
Grand Junction Resource Area
764 Horizon Drive
Grand Junction, CO 81501

April 20, 1984

Dear Ms. Dougan:

The Grand Junction Planning Department and Commission has been regularly involved in discussions with Public Service Company regarding the proposed up-grade. The following are our comments regarding the draft Environmental Assessment. Some of these comments have been previously transmitted to Public Service Company for their consideration. Although many of these comments address concerns outside of the corporate boundaries of Grand Junction, we strongly feel that the location of proposed facilities anywhere in this area will affect the citizens of the City and therefore deserve comment.

1. In a letter to Larry Keith of Public Service Company, dated November 28, 1983, the Grand Junction Planning Commission expressed strong opposition to siting the transmission line along the Colorado River and expressed a preference for paralleling the railroad. A copy of this letter was included in the preliminary draft Environmental Assessment of December 16, 1983, but seems to have been omitted from the latest draft. We request this input be included.

2. We recognize that some river crossings are unavoidable, but we are concerned over the preferred alternative that indicates a crossing at the Walker Wildlife Area. This appears to be a critical winter habitat area for migratory waterfowl and the lines in proximity to this area are sure to have adverse impacts as the waterfowl travel to and from feeding areas and the lake. As an alternative, we propose extending the line along the railroad (link 61) and crossing the river south of Fruita (links 62 and 67).

3. In all cases where the line crosses the floodplain areas, special protection should be provided against raptor electrocution.

4. We support the proposed routing through the wild horse area as long as the stated mitigation measures are closely followed.

5. We support the proposed alternative from Grand Junction to Clifton (corridor A).

6. As stated in the Environmental Assessment, the timing of construction to minimize wildlife impacts should be a prime consideration.

We feel that the Environmental Assessment is well prepared and appreciate the opportunity to comment.

Sincerely,

Carl G. Metzner
Carl G. Metzner
Director of Planning

KGM/tt

xc: Ray Gronwall
Gerald Ashby
Jim Patterson

Response

Grand Junction Planning Department (Metzner)

1. This letter has been incorporated into the FEA.
2. This combination of links is Alternative L, which has been made a primary alternative. Note that the proposed action has been changed to Alternative J.
3. No electrocution danger exists to raptors from this project. See Page 4-3 of the DEA.
4. The stated mitigation will be closely followed. In addition, an access plan will be prepared for BLM approval to further minimize impacts.
5. We acknowledge your comment.
6. The timing of construction to minimize wildlife impacts will be a prime consideration.

PUBLIC HEARING -- GRAND JUNCTION CONVERSION TRANSMISSION LINE PROJECT -
ENVIRONMENTAL ASSESSMENT (DRAFT) BEFORE B.L.M.,
April 3, 1984

Grand Valley Rural Power Lines, Inc. (Dawson)

My name is Brent Dawson. I am a Consumer Relations/Administrative Assistant with Grand Valley Rural Power Lines, Inc., headquartered here in Grand Junction. Grand Valley Rural Power Lines, Inc. is a consumer-owned rural electric cooperative serving approximately 8,000 member-consumers in Mesa, Garfield and Delta Counties of Colorado. The majority of our consumers are in Mesa County.

As a consumer-owned, non-profit cooperative, we are locally owned and locally controlled by the members we serve. Our primary responsibility is to endeavor to provide our consumers with the lowest cost electricity possible, consistent with a reliable electric distribution system. Revenues in excess of operating expenses (margins) are allocated back to our consumers, and are currently being refunded on a revolving plan.

Any action that affects the operations and expenses of the cooperative may therefore affect the margins, refunds, and in some cases rates, of the cooperative.

On May 9, 1983 Public Service Company of Colorado announced plans "to upgrade Grand Valley transmission lines" in a prepared news release.

This upgrading was proposed "to meet the growing electrical demands of the Grand Junction, Fruita and Palisade areas." The news release stated that the "new transmission line would cost anywhere from \$30 million to \$33 million."

Grand Valley Rural Power Lines, Inc. has approximately \$10 million invested in its total utility plant.

In the prepared press release of May 9, 1983, Public Service Company stated that "the company hasn't picked any specific line locations, and won't until community members have had a chance to comment on preferred routes." The press release went on to say that "it would be easy for us to determine where the lines should go, but that method may not be in the best interest of the area."

"Public Service Company has hired Edav, Inc., an environmental planning and consulting firm, to conduct environmental assessment studies to determine the locations of all possible transmission line corridors and associated substation sites."

In this press release Western Regional Manager for Public Service Company, Jim Temple, said the company "will also meet regularly with local governments and the Bureau of Land Management to meet their needs and concerns."

Within the last few days, a draft environmental assessment was delivered on this project to the BLM. Comments on this document and this project, are being accepted at today's hearing.

1. There have been ten (10) public workshops or public scoping meetings conducted during the course of this study. Neither the prepared press release of May 9, 1983, nor the resulting newspaper article stated "it would be easy for us to determine where the lines should go, but that method may not be in the best interest of the area".

Grand Valley Rural Power Lines, Inc. publicly was supportive of Public Service Company's efforts to construct a loop transmission line system in the Grand Valley area, to continue to serve the needs of their consumers in their certificated area with a dependable and capable electrical circuit. Grand Valley Rural Power Lines, Inc. stood to benefit by the concept of a loop feed because of an agreement whereby Public Service Company would furnish Colorado-Ute Electric Association (Grand Valley's wholesale supplier) with an inter-connection near the western end of the proposed transmission line. This action would afford Grand Valley Rural Power Lines, Inc. a tap for its 69 kv transmission line which runs from the Colorado-Ute substation on Orchard Mesa diagonally across the valley to Loma. Therefore, Grand Valley supported the upgrading of the 69 kv loop to a 230 kv loop, with the understanding that PSCo. would generally use their existing 69 kv corridors.

The Draft Environmental Assessment now before the BLM concerns Grand Valley Rural Power Lines, Inc. in that:

- 2 | 1. Little, if any, coordination was sought by Public Service Company from Grand Valley in regard to the planning of this project and routing of the transmission lines.
- 3 | 2. Some alternatives, including the current northern proposed alternative, are routed through Grand Valley Rural Power Lines, Inc. certified service territory (essentially north, east and west of Fruita), and in the judgment of Grand Valley Rural Power Lines, Inc. may not, in fact, be indicative of the route with the least impact to the citizens of Mesa County, including the consumers of Grand Valley Rural Power Lines, Inc.
- 4 | 3. Public meetings held for the purpose of obtaining public input on this project were not well attended.
- 5 | 4. Grand Valley Rural Power Lines, Inc. is prepared to suggest a possible viable alternative route which essentially utilizes the existing 69 kv corridor from Cameo to Fruita, rerouting around Walker Field, back to the I Road corridor to Fruita.
- 6 | 5. Grand Valley Rural Power Lines, Inc. has not agreed to the statement that: "The Garfield Substation will continue to operate as a 69/13 kv substation. However, it will be supplied at 69 kv from the Grand Valley Rural Power Lines, Inc. existing 69 kv line through a short tap to be constructed by PSCC south of I-70" (See p. 1 - 4 Draft Environmental Assessment)
- 7 | 6. Grand Valley Rural Power Lines, Inc. suggests that there has been inadequate time for the general public to inspect, analyze and review the current Draft Environmental Assessment and its impacts upon the consumers of Grand Valley Rural Power Lines, Inc. as well as other members of the general public.

This concludes my statement.

2. Public Service Company's planning for this project has been coordinated with the Colorado Ute Electrical Association (CUEA), as these two companies provide all of the bulk power for area electric needs. The planning of the specific project requirements is integrally related to the CUEA Rifle-San Juan Project, of which PSCC has a 25% interest in the Rifle to Grand Junction segment. This allows PSCC to accept delivery of bulk power at the CUEA Grand Junction Substation. Grand Valley is involved in area bulk transmission only as their local needs are dictated to CUEA.
- Grand Valley was invited to attend a meeting with PSCC and CUEA in Montrose, Colorado, on December 20, 1983, which they chose not to attend. PSCC representatives met with Grand Valley on December 19, 1983, to discuss the routing between Harizona and Fruita. Grand Valley has been represented at public meetings on October 4 and 5, 1983, and have made no requests for additional input at anytime.
3. Due to the broken geographic configuration of the various utility service areas and the few sources of generation, it is neither possible or expected within the electric industry that transmission lines which link generation sources and substations with the ultimate users could avoid crossing the service area of another utility. The many miles of line that Grand Valley Rural Power Lines, Inc. currently operates within PSCC certified service territory is indicative of this reality.
4. As indicated in Section I, D of the DEA, numerous public meetings were held at all stages of the study. These meetings and workshops were announced in the three local papers in large ads containing maps of the study area, in addition to radio announcements. See Appendix C of the DEA.
5. A connection to the I Road corridor cannot be made from the Cameo Power Plant without going well north of I Road and west into the cultivated farmland before going south to intersect the I Road corridor. This is because of FAA-mandated height limitations in the air space near the Walker Field, including the proposed addition of a second major runway. Variations of such an alternative were developed, evaluated, and re-evaluated after meeting with GVRPL on April 16, 1984, but then rejected based upon the airport conflicts. (Isbill Associates Inc., who is the consultant to Walker Field, reviewed the alternative transmission line routes on two occasions. They indicated conflicts with the Walker Field expansion airspace which necessitated realignment or rejection of these and other alternatives in letters to EDAP inc. on October 14, 1983 and May 7, 1984.) Higher environmental and land use conflicts would also have resulted from this alternative had the FAA regulations not prevented it. See the discussion of Alternative 119 in Chapter 2 of the FEA for more information.
6. PSCC will construct a new 69/13-kV substation near the existing 69-kV line east of Palisade. The existing 69-kV line from Cameo would remain operating at 69-kV.
7. The EA has exceeded all federally prescribed requirements for public notification and duration of the comment period.



Industrial Developments, INC.

Grand Junction, Colorado

360 Grand Avenue, Grand Junction, Colorado 81501 (303)242-3214

Industrial Developments (Eisenhauer)

I. We acknowledge your comments.

April 3, 1984

Julia Dougan, BLM
Grand Junction Resource Area
764 Horizon Drive
Grand Junction, CO 81501

Dear Ms. Dougan:

1 As Executive Director of Industrial Developments, Incorporated, which is a division of the Grand Junction Chamber of Commerce, our main interest in the Grand Valley area, of course, is economic development.

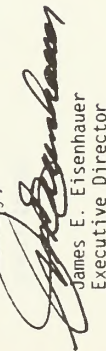
It is our aim to work for new industry and for the expansion of existing businesses in the Grand Junction area. We find that new industries interested in locating or relocating to this area place much importance on the availability of sewer, water, and power. These three items are their prime concern and must be available and reliable.

Therefore, it is our position to support Public Service Company's proposed conversion project so that power is available to those companies and industries interested in locating in Grand Junction and Mesa County. This will enable new industry to locate in this area, thus, increasing the tax base and providing new jobs for the people of this valley.

After reviewing the Draft E.A., we think the system proposed by Public Service Company is very timely and the corridors proposed in the study appear to minimize environmental impacts. We, particularly, favor the location along Link 3 which eliminates the visual impact on Mount Garfield from I-70 when entering or leaving the valley.

Thank you.

Sincerely,


James E. Eisenhauer
Executive Director

RECEIVED 4 4 1984

JE/dc

Letter J

Response

RECEIVED APR 5 1984

Jaynes

I. We acknowledge your comments.

April 3, 1984

Julie Dougen
Bureau of Land Management
Grand Junction Resource Area
764 Horizon Drive
Grand Junction, Colorado
81501

Re: Public Service Company of Colorado, Grand Junction Conversion Transmission
Line Project.

1 My schedule being such that I cannot attend the hearings scheduled on the above referenced project, I write this letter to express my support for "Link 3" as the choice for location of the proposed line.

While I have appreciation for the multitude of factors to be considered I find it necessary to combine the evaluation of impacts upon aesthetics, wildlife and economics. It is my determination that "Link 3" logically and effectively blends these factors into a balance that cannot be achieved by any other proposed routing.

Thank you for allowing my opinion as a consideration.

Sincerely,

Ronald R. Jaynes

Ronald R. Jaynes
5885 E. Road
Palisade, Colorado
81526

Copy: Jim Temple
Western Division Manager
Public Service Company of Colorado
P.O. Box 849
Grand Junction, Colorado
81502

Kania

I. We acknowledge your comments.

RECEIVED

JUN 27 1984

2715 W. 86th Avenue #21
Westminster, CO 80030
April 1984

Ms. Julia Dougan
Bureau of Land Management
Grand Junction Resource Area
U.S. Department of the Interior
764 Horizon Drive
Grand Junction, CO 81501

Dear Ms. Dougan:

With regard to the planned upgrade of the Public Service Company of Colorado's power lines through Coal Canyon in the Little Bookcliffs Wild Horse Area, I would like to submit this letter of acceptance.

As an active advocate of the wild horses throughout the western United States and other countries, I have been impressed with the concern expressed by the planners for Public Service Company of Colorado for the welfare of the animals and the overall ecosystem within the Little Bookcliffs.

I have been informed that the existing roads will not be expanded and that only the immediate vegetation at the point of entry of the posts will be affected by the construction of the power lines. The company officials have been very aware of the biological needs of the animals in the area and I have been satisfied that no adverse effects will incur.

It has been a pleasure to work cooperatively with the Public Service Company on this issue. While no one likes to see "progress" invade the tranquil environment of the western back-country, I believe that Public Service Company of Colorado is making every effort to minimize the impact on the environment.

Sincerely,

Alan J. Kania

STATEMENT

TO: THE U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
764 HORIZON DRIVE
GRAND JUNCTION, COLORADO 81501

The signers of this statement are landowners or residents or both of the area of Mesa County, North, East, and West of the Town of Fruita. Public Service Co. of Colorado, (PSC) desires to construct and operate a 230 kilovolt transmission line through this area. The proposed alternative routes are shown on the attached plat prepared by PSC and which appear as page 2-1 of the Draft Environmental Assessment on the Grand Junction Conversion Transmission Line Project, presented to the Bureau of Land Management on March 19, 1984. Specific objection is made to all alternative routes, or possible combinations of alternative routes which place any portion of the proposed transmission line north of and including I Road. As owners and users of the land over and through which this proposed 230 kilovolt line would run, we object to the proposed routes for the following reasons:

- 1 There is a viable alternative route utilizing the existing "I" Road corridor that would not further impact additional agricultural lands.
- 2 Such a transmission line would have a significant impact on people, their lives and their methods of farming.
- 3 No permanent Resource Management Plan has been completed for portions of the map described as figure 2-1 in the Draft Environmental Assessment on this proposed project, delivered to the Bureau of Land Management March 19, 1984.
- 4 The construction of additional supporting transmission towers or poles of this type on and through these farm lands would further inhibit the free movement of farm machinery, create hazards to people and prevent proper operation of farm lands.
- 5 Crops in this area are customarily sprayed by helicopter or fixed wing aircraft. The presence of additional high voltage transmission lines and supporting poles or towers of this type would prevent effective spraying.
- 6 The proposed transmission towers and lines are destructive of visual aesthetics.
- 7 All of the foregoing would affect the value of farm land in the area. Mesa County can ill afford further impacts on land values. This land is now mostly Class 1 Agricultural Land, highly productive of crops and income.
- 8 The Draft Environmental Assessment currently before the Bureau of Land Management warrants further in depth analysis.

The signers of this statement hereby request that a copy of this statement and copy of signatures related thereto be incorporated into and made a part of any Final Environmental Assessment or any other applicable environmental report(s) submitted for consideration on this proposed project.

Landowner/Resident Petition

1. The I Road corridor was evaluated in detail as an additional alternative. It was subsequently rejected, primarily due to three factors: (1) FAA requirements far overriding conflicts with the Walker Field expansion, (2) the existing 69-kV line down I Road will be removed regardless of which alternative is selected, thereby eliminating the existing corridor, and (3) after detailed analysis, it was found that impacts overall would be significantly higher than with the preferred or other alternatives studied (See Item 2 below). Landowners will be fairly compensated for any crop loss or reduced productivity of farm land (See references to Page 4-4 in Chapter 4 of the FEA).
2. It is recognized that construction of a transmission line inevitably creates impacts. The objective of this study is to identify the potential impacts and reduce them as much as possible through proper design and location. In total, 99 distinct alternatives were evaluated in detail for this project, and many more were considered which proved to be unfeasible. The analysis shows that the I Road Alternative would have significantly greater visual impacts than the preferred (noticeably affecting the views from 387 homes versus 55 for the preferred, and 4.75 miles of I-70 and Highway 6 and 50 versus none for the preferred). The effects to agriculture would be virtually identical between the two alternatives. For more detail, see the discussion of Alternative 119 in Chapter 2 of the FEA.
3. It is not necessary that the Resource Management Plan (RMP), now under way, be completed prior to construction of this project. All public lands in the project area are covered by an existing Management Framework Plan. These plans are dynamic and are continually in the process of being updated. No RMP is permanent.
4. See responses 1 and 2 above.
5. Landowners will be compensated for any such production losses. See references to Page 4-4 in Chapter 4 of the FEA.
6. See response 2 above.
7. The preferred alternative crosses significantly less prime farmland of national significance than the I-Road Alternative, according to the U.S.D.A., Soils Conservation Service.
8. The BLM recognizes three levels of environmental documentation: an EA, a comprehensive EA, and an EIS. This document is a comprehensive EA; but in fact, it meets all technical analysis requirements of an EIS as prescribed in NEPA, CEQ, and the BLM Environmental Handbook. The objective of an EA is to determine whether an EIS is necessary. The technical analysis done for this study was of EIS detail, but has not shown anything to indicate that on EIS is warranted or that it would lead to any different conclusions.

Also, numerous public meetings were held throughout the year-long course of the study which were well advertised with maps showing the potentially affected area.

Letter L Cont.

NAME	ADDRESS
David S. Smith	1382 17 1/2 Rd. Fruits
Abel R. Dady	1224-18th Fruits
Marcella Bladley	1268 18th Rd Fruits
John Bladley	1802 2nd Rd Fruits
William F. Ryan	1287 1 1/2 Rd. Fruits
Vanda Bladell	1803 M Road Fruits
Clara Bibles	1804 of Road Fruits
Loon Allison	P.O. Box 471 Fruits
John Blair	P.O. Box 122 Fruits
Frank Bladell	1803 M Rd Fruits
Vanda Bladell	1103 M Rd Fruits
Randy Boyer	1298 18 1/2 Rd Fruits Co
Charles Boyer	1353 M Road Fruits Co
John Boyer	1286 M Road Fruits Co
James Boyer	
James Boyer	1315 18 1/2 Rd Fruits
John Boyer	1315 18 1/2 Rd Fruits
James Boyer	1272 18 1/2 Rd Fruits
Ernest L. Boyer	2146 M Rd, Grand Jct.
Elizabeth L. Boyer	2146 M Rd, Grand Jct.
David R. Boyer	2182 M Rd Grand Jct
John Boyer	2182 4th Rd Grand Jct
John Boyer	2183 3rd Rd Grand Jct
John Boyer	2183 3rd Rd Grand Jct

NAME	ADDRESS
Frank J. Goble	1143-23RD 81505
Sam Jackson	2494 11 COURT 81505
Nicholas	2107 Teton N.J. 81523
Sam Nale	2397 S. San Miguel C.T. 81505
James S. Hamilton	16 Coconino Ct. C.T. 81503
Walter Haysen	1675-12 Rd Loma Co. 81504
Ronald W. Gervis	2006 KAL FRUIT CO. 81521
Steve Ryan	1425-12 Rd Loma Co. 81523
Don L. Williams	2234 Road Loma Co. 81521
Earle Denton	1361 Hernandez A. L. Road JCTC
Ralph Schuchman	2216 L Rd C.T. 81505
Pat S. Stenderant	2216 S Rd Loma Co. 81505
Carl Haller	1202-22 Rd Rd 81505
Virginia Haller	1202-22 Road Loma Co. 81505
Paula Graser	1044-19 1/2 Rd Loma Co. 81521
Robert L. Price	1189 22 Road Loma Co. 81505
Volter Most	2227 L Rd Loma Co. 81505
Alvin E. Went	2227 L Rd Loma Co. 81505
James C. Currie	2700 N. Road
Glen L. Currie	1255 22 Road Loma Co. 81505
Adelaide C. Currie	1255 22 Rd. C.T.
Edward J. Holmes	2150 L Rd C.T.
Belen Edling	1298-21 Road Loma Co.
R. A. Edling	1298-21 Road

Letter L Cont.

NAME	ADDRESS	NAME	ADDRESS
Robert Shelle	1155 22 1/2 Rd Grand Teton Co	Fred A Starr	2082 m Road C. S. 81500
Charles S. & Cudley	1198 23 Rd	O'Connor Brothers, Inc	
Don & M. Cudley	1191 23 Rd	Jack E. O'Connor, Inc	1155 21 Road Grand Teton 81505
Laurie Blackmore	2322 K 3/4 Rd	S. James (O'Connor)	1052 21 Road Grand Teton 81521
Laura M. Chutter	2348 K 3/4 Rd	Thomas A. O'Connor	1098 21 1/2 Rd. Grand Teton 815
Blair P. Adams	2360 K 3/4 Rd	Linda J. O'Connor	1334 21 Rd Grand Teton 81505
Glenn Nelson	1116 23 1/2 Rd	Heater Starr	2085 21 Rd Grand Teton
John Peterson	1176 23 1/2 Rd	Sam K. Starr	2052 m. Rd. Grand Teton
Ken Marshall	2261 L Road	Steve Franklin	2043 N Rd. Fruita
Paul Wayne Finkell	1205 - 23 Road	CR Franklin	2054 L Rd Fruita
Shirley L. Finkell	1205 - 23 Road	Bruce Keller	1824 L Rd Fruita
Terry Gray	1217 - 23 Rd.	Walter W. Grogg	1156-20 Rd. Fruita
Janet Gray		Letitia Grogg	1273 20 Rd Fruita
Frank G. Gable	22344 Rd Grand Teton	Paul Grogg	231 Rd Fruita
Colan P. Gable	1151-23 Rd, Grand Teton	Shirrell Clark	1302 20 Rd Fruita
Karl Gable	2256 L Rd Grand Teton	Frank O. Galtman	1376 20 Rd Fruita
Don W. Gable	2276 L Rd Grand Teton	Debra K. Galtman	2002 N Rd Fruita
Ray Gable	2706 Rd Et 81501	Beryl Mae	2048 N Rd Fruita
Shirley Gable (Wagoner)	1449 18 Rd. Fruita	Ed Galtman	1849 - 21 Rd Grand Teton
Carl Landini	1850 21 1/2 Rd - Fruita	Carol Galtman	2075 K 3/4 Rd Grand Teton
Steve P. Galt	1338 19 Rd Fruita	Frank Galtman	1164 21 Rd Grand Teton
W. Galtman	2000 Grand Teton - 5 Rd. Ab. 81500	John Galtman	2148 1/2 Rd Grand Teton
Robert G. Galtman	1821 N 1/2 Rd Fruita Colo	James T. Galtman	1199 20 Rd Fruita, Colo
Carmel R. Galtman	1475 - 19 Rd Fruita Colo		
Laurie M. Galtman	1820 0 Rd Fruita, Colo		

Letter L Cont.

NAME _____

ADDRESS

Raymond W. Underhill

1315 18th Road

James Goodrich

1851-1852 Road

W. & L. G. Moore

1360 18 1/2 17 D

Lead Pencil

1360 18 y. Rd

Lamae

15 12 12 12 12

11-20-22

1360 18 1/2 Ref

Harry List

1364 18 1/2 Rd

Melvin Roberts

1364 18 1/2 P8

Boyle Linnell

1908 Mar. 10

July Season

1301 18222.

Letter March 28

1777 M. Rd.

Dear Mr. Kelly, thank

1302 172.2

Ralph Wood

1302 17 1/2 00

Oct 10

1359 17 Ad.

Donnerstag
Donnerstag

1774 L R 1
1324 11 1/2 R 1

Louis Arayet

18760 Rd. Fruits

Mrs. Mrs. L. L. Lawrence

1909 N. Road Taut.

Mr. Wm. Lee Valley

1709 N. Reed Frigate.

Mrs George Faulk

1425-19 Rd, Fruit

25 April 84

Julie Ougren

B&M

Grand Junction, CO

Dear Ms Ougren:

1 I would like to submit my comments regarding the Public Service Company Powerline Proposal. Specifically, I would like to protest the proposed placement of the line through new portions of Coal Canyon.

Currently the B&M MFPs prohibit issuance of new Rights of Ways in the Little Bookcliffs Wild Horse Range. This decision was made with the intention of allowing no new disturbance. PSCs proposal to mitigate disturbance are well intentioned. However, following the existing Right-of-Way through the Horse Range will keep the disturbance confined to areas where the public is already used to powerlines, and will keep the remainder of Coal Canyon available for those who wish to get away from human disturbances.

Thank you for your consideration

Yours

Samuel J. McReynolds

Samuel J. McReynolds

1. As stated on Page S-1 of the DEA, one purpose of this document is to address the need for an amendment to the MFP for the Roan Creek and Winter Flats areas. All alternatives, including those following the existing alignment, would cross the Wild Horse Management Area and, therefore, necessitate this amendment.



Mesa County Policy and Research Office

544 Road Ave Rm 89
Grand Junction, Colorado 81501

(303) 244-1878

RECEIVED

APR 23 1984

GRAND JUNCTION RESOURCE AREA
GRAND JUNCTION, COLORADO

April 24, 1984

Julia Dougan
Bureau of Land Management
Grand Junction Resource Area
764 Horizon Drive
Grand Junction, Colorado 81501

Dear Ms. Dougan:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Grand Junction Conversion Transmission Line Project. The following comments from the Policy and Research Office, Parks Department, Planning Department and Health Department represents Mesa County's staff review of this document.

PARKS DEPARTMENT

1. The EA was well researched and detailed. We agree with the proposed routes except for the Horizon - Fruita segment. Alternative B, of this segment, would result in more visual impacts, in the future, than the LL Alternative, due to anticipated residential growth in the Appleton area. While it is true that more people will view the LL Alternative, from their autos, it is already a transportation corridor, and thus more compatible. The visual impact to viewers from their residences has been time and again expressed to be more significant than from their autos.

2. Alternative BB should be avoided at all costs due to a proposed Greenbelt in this area. If and when that Greenbelt is developed, the visual impacts would be greater than the other alternatives. The recreational impacts are also greater, resulting from BB in the Horizon-Fruita segment.

3. Likewise, Alternative L in the Grand Junction-Clifton-Colorado Ute segment should be avoided, also due to the proposed Greenbelt in the Gunnison River area. A proposed regional park in the confluence area (Colorado and Gunnison Rivers) would also be adversely affected by Alternative L.

4. We would also like to add that the visual impacts from Alternative WW of the Cameo-Fruita segment would be more adverse to the general public than the AA Alternative, due to the view from Valley residences, as opposed to the assessed visual impacts from autos on I-70 as stated in the EA. However, as I stated earlier, I do agree with the proposed Alternative A route.

Mesa County Policy and Research Office (Granwall)

1. The proposed action for the Horizon-Fruita segment has been changed from Alternative BB to Alternative J.
2. The proposed action for the Horizon-Fruita segment has been changed from Alternative BB to Alternative J.
3. We acknowledge your comment and concern.
4. Your comment has been noted.

HEALTH DEPARTMENT

- 5 1. We reviewed the section of the document appropriate to the interests of this Department. The impacts associated with this project will be greatest during the construction process.
- 6 2. The short duration of the effort and limited workforce required will reduce the potential for overloads of existing urban services to near zero. Sanitary facilities in remote areas can be provided through use of portable units.
- 7 3. There do not appear to be any readily identifiable long term environmental impacts of significance to this agency. The availability of electrical power may, in the long run, result in a higher level of industrial or residential development. Either of these may require an expansion of the existing municipal services. We do not anticipate any significant expansion of either type to occur coincident with construction of the line.
- 8 4. In summary, the construction of the project is of more concern to this agency than the line itself. PSC has identified mitigation measures, the construction period is relatively short, and no great influx of workers is anticipated. Thus, no significant adverse impacts are anticipated.

PLANNING DEPARTMENT

The Draft Environmental Assessment for this project contains a great deal of valuable information, but should be strengthened in a number of areas:

- 9 1. Visual Assessment - Additional visual assessment is needed for all of the corridors to adequately assess visual impacts. Such an evaluation should include a Visual Features Map which highlights major visual features, major "viewsapes" and the alternative power line routes and how they impact the major viewsapes. This should be an improved version of the map in Figure 3-8. The Colorado National Monument should be included as an area of high scenic quality. Arrows or other such devices should be used to designate major views, viewing areas and viewsapes.

- 10 2. Recognition of the Colorado River/Gunnison River Greenbelt Open Space as an important parallel public open space Corridor recognized by both the City of Grand Junction and Mesa County on officially adopted plans.

The greenbelt proposal would entail a strip of land on both sides of the Colorado and Gunnison Rivers which remains as permanent natural open space and, in the case of the large stretches of the river which have been desecrated by intensive gravel mining and industrial uses, reclamation of the river banks with in-fill planting and creation of ponds and lagoons suitable for wildlife habitat restoration. The greenbelt concept includes the opening up of one or both sides of the rivers to limited public access as a trail/linear park (for bicycling, hiking, jogging) as easement, right-of-way or fee simple ownership. Much of the concept could be achieved through the acquisition of conservation easements over private land rather than outright acquisition.

5. We acknowledge your comment. The mitigation in the DEA was designed with this in mind.
6. No response necessary.
7. No response necessary.
8. We acknowledge your comments.
9. Prominent visual features in and adjacent to the study area have been identified on Pages 3-18 to 3-20. These features (including The Colorado National Monument) have been identified on Figure 3-8 and numerous other report maps.
- Scenic views to these prominent visual features ("viewsapes") can be found from almost anywhere within the study area. Some become more sensitive than others due to either the concentration of people (i.e. I-70) or the nature of their activity, (i.e. recreation areas). These have been identified and briefly discussed in the DEA. Beyond these specific areas, there is little to distinguish the sensitivity of viewpoints within the Grand Valley. Outstanding views are the rule rather than the exception. Evaluating views from this infinite number of viewpoints would not help to distinguish between siting opportunities outside the context of the proposed project. However, once a system of primary alternatives were developed, a series of visual simulations was prepared as a basis to compare the visual effects of the various alternatives from key and representative viewpoints. Reduced black and white reproductions of these simulations are presented following Page 3-4 of the FEA. The locations of these simulations is keyed to Revised Figure 3-8.
10. We recognize the open space proposal and the recreation value of the Gunnison and Colorado Rivers. There is a specific reference to the proposed linear open space area on Pages 3-12 and 4-19 of the DEA. Page 4-5 addresses recreation concerns for the Cameo-Fruita segment which does not affect the Colorado River.

Since the existing 69 KV line closely parallels the greenbelt route on the Colorado River form the Walker Wildlife Area on the west to 30 Road on the East, there should be a specific reference of this linear park and Parks Plan on pages 3-12 and 4-5.

10

The revegetation specifications (Table 2-10 and 2-11) should be modified to include the following:

11

Table 2-10 suggests many acceptable species for a Pinion-Juniper Ecosystem. We question the use of black sagebrush as the only sagebrush listed as it is one of the least salt tolerant of the genus. It also appears that this selection is limited to the Cameo Plant site in this corridor study.

Table 2-11 includes many desirable species also. We would add some more salt tolerant species such as Alkali Sacaton (*Sporobolus alvoides*), Weeping Alkali Grass (*Puccinellia distans* "Falts") and Lemmons Alkali Grass (*Puccinellia lemmonii*). These will fill those salty areas common along the corridor. We also missed seeing rabbitbrush (*Chrysothamnus* species) in the shrub list. A greater selection of saltbrush species (*Atriplex* spp.) would also allow diversity in the high salt areas.

We recommend that the adopted Roadway Landscape Guidelines for Mesa County be used wherever the proposed transmission line follows major roads. We also recommend that Public Service Company plant and maintain these areas.

12

Due to the large visual impact this project will have on the residents and visitors of the Grand Valley, we recommend that Public Service Company add the following to their mitigation plan.

13

A) Public Service Company should contribute to the further development of the Walker Wildlife area.

B) Public Service Company should contribute to the current Development Impact Fund for park land acquisition.

C) Public Service Company should contribute to the Connected Lakes Park Fund. This fund has special relevance since a portion of the transmission line will pass very close to this park.

D) Public Service should recognize the commitment of Grand Junction and Mesa County to a Greenbelt system along the Colorado and Gunnison Rivers.

11. We acknowledge your recommendations. Note that these Tables contain an indication that the species listed therein are typical and that final seed mixes will vary depending upon the specific site conditions and are subject to the desires of the landowner/manager. Note also that most of your recommendations are already included in Table 2-11.

12. Reclamation/rehabilitation procedures are discussed in Chapter 2, Table 2-9 of the DEA. These procedures will be carried out pursuant to applicable local and federal regulations.

13. Extensive effort has gone into the visual analysis conducted for this study to, first, avoid sensitive scenic features and visual conflicts with them; and second, to develop various measures to reduce the visibility of the structures. The visual analysis inventoried the effect to views from each house within 1/2 mile from any of the alternatives as well as all recreation and open space areas and all major highways. Prominent ridges were identified in an attempt to prevent skylining. Scenic areas of concern to the County and BLM were inventoried. In addition, a visual contrast rating was conducted on all public lands in accordance with BLM guidelines. Finally, a series of 12 photographic before and after simulations of the proposed line were prepared and presented at agency and public hearings. Besides these siting analysis efforts, a series of mitigation measures was developed which include single column poles instead of lattice, dulled towers and non-specular conductors. One of these measures will result in enhancing the scenic eastern entrance to the Grand Valley by removing the existing 69-kV line along I-70, in the vicinity of Mount Garfield. Because of these siting and mitigation efforts, visual impacts will be significantly reduced.

The only segment of the proposed development that is in close proximity to any of the mentioned area parks or plans is the portion of the Horizon-Grand Junction segment. This segment follows the alignment of the existing 69-kV line from a point just west of the Redlands Substation to the Grand Junction Substation.

However, the project as currently proposed will have no effect on Walker Wildlife Area or other park lands. The project will also not have any significant effect on the Connected Lakes because of the fact that the proposed 230-kV line in that vicinity will be constructed along an existing right-of-way, replacing existing 69-kV line structures. Therefore, contributions for funds for the development and enhancement of these areas would be uncommitted mitigation whose implementation would be dependent upon county, city, and Public Service Company agreements.

Public Service Company has long believed that it has a major obligation to help improve the quality of life in the communities in which it serves. The unique role of corporate philanthropy is that it must respond to the traditional needs of the community. A meaningful contributions policy, however, depends on more than giving away money. All employees of Public Service Company are encouraged to give their time and talent to community programs. Corporately, funds available to Public Service Company for charitable contributions permit the Company to fulfill some of its citizenship responsibilities by putting dollars back into the communities which it serves.

Requests for contributions are analyzed on an individual basis. Consideration is given to the organization's current purposes, financial stability, and their compatibility with the Company's community objectives. The objective of every donation is to get the greatest return from the contribution dollars, as indicated by the degree of real influence the contribution made in assistance to solve community problems.

POLICY AND RESEARCH OFFICE

14. This office has recently reviewed and updated the Mesa County population estimates since the 1980 census. To assure uniformity in all demographic references, we recommend that the following be used in Table 3-3.

	1981	1982	1983
Mesa County	89,009	94,381	92,784
Collbran	383	414	410
DeBeque	335	405	353
Fruita	3,102	3,300	3,252
Grand Junction	29,798	31,634	30,934
Palisade	1,767	1,985	1,911
Unincorporated	53,624	56,643	55,524

15. (P.4-46 & 4-47) (Short-term Uses Versus Long-term Productivity) We recommend that the definition of long and short term be changed. The short-term of this project may be best defined as the construction phase and long-term; the period thereafter. This transmission line will most likely remain for a long time. Also, there is no definition of "the life of the project" in this EA. When analyzing short-term versus long-term impacts, construction versus the remaining period makes more sense. The visual impacts of a transmission line in a residential area cannot be considered short-term.

16. Recognizing that the Board of County Commissioners has the sole authority to decide upon the final location of this transmission line, this office makes the following staff recommendations.

- A) For the Cameo-Fruita segment, we recommend Alternative A. This alternative complies with the adopted Mesa County Land Use and Development Policies in that it avoids the visual impacts on Mt. Garfield, makes maximum use of undeveloped land, uses existing rights-of-way where possible, and minimizes impacts to agricultural land.

Link 2 of Alternative AA will further impact the views of Mt. Garfield. Link 2a of Alternative WW has not been addressed in this EA in sufficient detail to consider this option over Alternative A. This transmission line cannot avoid impacting agricultural land between the Highline Canal and the Gary Substation. It is our opinion that the proposed Alternative A has complied with the adopted Policies in that it minimizes the impacts. According to the data and analysis in the EA, any other route would cause greater impacts on other landowners and residents.

One recent example is Public Service Company's participation with Mesa County and other businesses to stabilize the dike adjacent to the Colorado River and Dike Road.

Public Service Company's corporate comprehensive giving program is characterized by contributions that are a product of a thoughtful development process, are directed toward specific objectives with specific strategies to reach the goal, address basic community needs, have a high impact on the community and problems addressed, and are directed toward goals which are legally and technically feasible and attainable. The contributions made by Public Service Company are classified as either corporate contributions or divisional contributions. Examples of corporate contributions which the Company has participated in include the United Way, the Energy Assistance Foundation, and the Western Colorado Center for Arts. Divisional contributions which the Company has participated in include local hospitals (St. Mary's), the Grand Junction Symphony, museums, Chamber of Commerce, I.D.I., and other organizations or activities whose benefits are almost exclusively within a single geographic area.

14. We have incorporated this updated information into Revised Table 3-3 in the FEA.
15. The basis for the time periods associated with the short-term/long-term discussion in the DEA, is the BLM Environmental Handbook Section III.E.7.g. which states: As a general rule, short-term is defined as the life of the project plus three to five years for dismantling the project. Long-term would be any point beyond this. The proposed 230-kV system is designed to provide electrical service to PSCC customers in the Grand Valley for a period of 20 years (until the year 2010) under the growth scenario discussed in Chapter 1 of the DEA. It is the practice of Public Service Company to maintain the integrity and reliability of the transmission and distribution system through systematic patrols and maintenance procedures. It is possible, therefore, that this system or portions of this system would continue in service for 40 years or more. The life of specific facilities associated with this project is dependent upon a variety of factors, including load growth, weathering, vandalism, etc., and is therefore indefinite.
16. We acknowledge your comments. In each case, these are both PSCC's proposed action and the BLM agency preferred alternatives.

B) For the Horizon-Fruita segment, we recommend Alternative J. This Alternative complies with Mesa County's adopted Policies in that it uses existing transportation and utility corridors and uses shared rights-of-way.

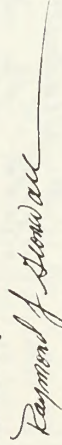
Since I-70 is south of this proposed line, the major view of the Colorado National Monument to travellers will be preserved. Although Alternative BB does not have the visual impacts from major arterials, the impact on the Colorado River and Walker Wildlife area are not consistent with the adopted Policies. The other Alternatives of B and LL would directly impact a greater number of landowners and residents.

C) For the Grand Junction-Colorado Ute segment, we recommend Alternative A. This alternative complies with the Mesa County adopted Policies in that it uses existing transportation and utility corridors and uses shared rights-of-way. Since this transportation is currently highly developed, it is our opinion that any visual impacts would be offset by the existing development.

Alternative D and I do not conform to the adopted Policies by impacting the Colorado and Gunnison Rivers. Alternative J would affect a much larger number of landowners.

Again, thank you for the opportunity to comment. If you have any questions or concerns, please feel free to call.

Sincerely,



Raymond J. Gronwall
Policy Analyst

Enc.

1

To: BLM.

I would like to submit this in protest to the Public Service Company's proposed plan on a new power line in the wild horse range known as the Little Bookings.

I believe they should only be allowed to use the existing line now located in part of Pal Canyon. I protest any new poles, roads, or lines anywhere else in the range. Any construction should be kept to a minimum also.

Considering the years the existing line has been where it is and becoming an accepted thing, I feel to change its location should only bring attention to it and also cause an unnecessary expense to all concerned.

Financial difficulties of today should have us "tightening of the belt" treatment - not have "extend yourself" to the point it causes undo hardships.

When Purity needs the extra power and it costs it can acquire it at a lower cost to its people, wildlife and landscape by using the existing right of way.

Karen O'Rourke

3480 J. Rd

Clifton, Colo

434-6333

81520

Karen O'Rourke

1. Your concerns have been noted. Please refer to the discussion of these issues on Pages 3-9, 4-3, and 4-4 of the DEA.
2. We share your concerns regarding costs. Please refer to Page 5-5 of the DEA which indicates the cost of the proposed action to be \$52,700 less than the alternative utilizing the existing alignment.

RECEIVED

APR 25 1984

GRAND JUNCTION RESOURCE AREA
GRAND JUNCTION, COLORADO

TWO RIVERS CITIZENS ASSOCIATION
P.O. Box 3027
Grand Junction, Colorado 81502
April 25, 1984

Julia Dougan
Bureau of Land Management
U.S. Department of the Interior
764 Horizon Drive
Grand Junction, Colorado 81501

Re: Draft Environmental Assessment
of Public Service Company
of Colorado's Proposed
Conversion to 230 Kv Loop
in the Grand Valley

To whom it may concern:

1 Our organization was dismayed when we received and reviewed the Draft Environmental Assessment for this project. Several of our members met with representatives of PSCO and the company preparing the EA in the early stages of their involvement of the public with their planning. We expressed two major concerns. We questioned the need for a loop of this size in the valley given the increasing unlikelihood of near term major oil shale development and we expressed numerous concerns about the routing of the proposed line.

2 We were assured by a representative of Public Service Company that they would seek a Certificate of Public Convenience and Necessity from the Public Utilities Commission and that the need for the project would be examined in public hearings. We learned later that PSCO had sought a determination from the PUC that a CPCN was not required for the project and that the PUC had determined that one was required which they issued without public hearings. In light of the failure of PSCO to seek public hearings as its spokesman promised and of the PUC to hold such hearings we feel that the portion of the EA devoted to need is totally inadequate and amounts to a regurgitation of PSCO's public statements on need.

3 The major concerns we expressed regarding routing. We were chiefly concerned with impacts on Orchard Mesa and the Redlands. We proposed that the railroad corridor be followed as much as possible to avoid impacts on residential and agricultural areas. Company representatives seemed sensitive to our concerns and because of this we probably didn't maintain enough involvement with the public hearing that were held on the routing. When we examined the preferred alternative in the EA, we were shocked. Indeed our concerns about Orchard Mesa were addressed reasonably. However, the routing of the BB segment of the preferred alternative is totally unacceptable. The impact on the Colorado River flood plain and its wildlife is immense. The flood plain is the major remaining habitat for wildlife in the valley. The impact on the bald eagle nesting area's alone would make it undesirable. The impact of powerlines on large birds has recently been illustrated in the injury to the rare Whooping Crane near Gateway. If the preferred routing remains near the bald eagle nesting areas and the Walker Wildlife Refuge, our organization will insist that this project represents a major environmental impact and that NEPA requires a complete Environmental Impact Statement to be performed.

Two Rivers Citizens Association (Nation)

1. Public Service Company appreciated the concerns expressed during the early stages of preparation of the Environmental Assessment. The question regarding the need for a loop of this size in the valley was related to the need for a 230,000 volt system versus a 115,000 volt system (the next standard incremental increase in power equipment voltages). The participants in the meeting conducted on June 9, 1983, were advised that the purpose of the Environmental Assessment was that of a land use study to determine the locations of alternative transmission line corridors and substation sites. As a land use study, the voltage level (whether it was for a 115,000 volt system or a 230,000 volt system) wouldn't matter because the right-of-way requirements, structure heights, and substation site requirements would be almost identical for impact evaluation purposes.
2. The costs and scenarios which were evaluated by simulated power flows are summarized in Chapter 1 of the Environmental Assessment. The selected Scenario 2, which the system voltage was designed from, assumes that there will be no further shale oil development.
3. The concerns expressed regarding routing of the proposed line were greatly appreciated. As described in the FEA, the proposed alternative between Horizon and Fruita has been changed to the railroad route, thus avoiding the Colorado River.
4. Public Service Company filed an application with the Colorado Public Utilities Commission regarding a Certificate of Public Convenience and Necessity on September 27, 1983. A copy of Application No. 35863 was provided to Meso County. In the meeting with the Two Rivers Citizens Association on June 9, 1983, participants were advised that the PUC would decide whether or not to hold public hearings and that they should make any requests to the PUC.
5. The normal language used by Public Service Company in all such filings for a CPCN is to request that the project is proposed in the normal course of business. The PUC then determines if a CPCN is required. The PUC issued a CPCN for this project on November 30, 1983, in Decision No. C83-1790 (refer to Appendix D in the DEA).
6. The proposed action for the Horizon-Fruita segment has been changed from Alternative BB along the Colorado River to Alternative J paralleling the railroad.

3 We see no need for this routing. The railroad corridor is clearly the most reasonable (Alternative J) for this segment. Indeed, we are sensitive to the division of communities by railroads, highways and power lines but fail to see how the line would significantly impact Fruita which is already bisected by a four lane highway and a railroad. If it is necessary to accommodate this concern, however, we see no reason why the line can not be looped to the south of Fruita without crossing the river and returned to the railroad corridor. If this is not possible the LL Alternative to the north and east of Fruita is far superior to sacrificing the river area.

To reiterate, TRCA finds the preferred alternative total unacceptable. We will ask for a complete EIS to address the need for and routing of the line if the routing remains unchanged.

Sincerely for TRCA,



Ted Nation

RTN/rtn

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
COLORADO FIELD OFFICE
730 SIMMS STREET, SUITE 292
GOLDEN, COLORADO 80401

April 26, 1984

MEMORANDUM

To: EA Coordinator, BLM, Grand Junction
From: Asst. Field Supervisor, FWS, Golden, Colorado
Subject: Review of Grand Junction Conversion Transmission Line
Project Environmental Assessment

Please accept this memo as our office's comments on the subject EA. The Fish and Wildlife Service has mandates beyond endangered species management (Page 1-5). We therefore request that all further environmental reviews regarding potential energy development conflicts with wildlife be coordinated either through this office at the address above or our Grand Junction field office.

Although we believe that wildlife values are adequately portrayed in the EA, we have several concerns about project impacts on wildlife that warrant further attention.

1. The EA was not clear about methods used to reject those alternatives depicted in Figure 2-6. Obviously, the same analytical methods used to compare alternatives within line segments (Page 2-6 through 2-15) were not employed for those alternatives that were rejected. It is logical that wildlife impacts could best be avoided by placing the transmission lines through as much previously disturbed (urban) land as possible. Therefore, it appears (at least intuitively) that Alternative 102 would have substantially less wildlife conflict even with two river crossings. In addition, it must be noted that considerable, highly visual developments exist in the area through which Alternative 102 passes. According to Figure 3-8, much more visually sensitive lands will be affected by the Proposed Action than either Alternative 101 or 102. In view of the large expanse of currently undisturbed land that would be impacted by development of the Proposed Action, we strongly recommend reconsideration of Alternative 102 (or 101, if two river crossings east of Fruita can be avoided) for development. We believe a more complete "criteria" analysis is needed.

U.S.F.W.S. (Finley)

1. Wildlife was a primary consideration in the decision to reject Alternative 101 and 102 early in the study process. Each of these alternatives would involve closely paralleling the Colorado River for approximately four miles, and each alternative would also require two crossings of the river. Because of the high value of riparian habitat, every attempt was made to minimize conflicts with these areas during the siting process. Of more importance than short-term construction impacts is the potential for waterfowl collisions with the transmission line throughout the life of the project. The alternatives in the Book Cliffs present a conflict with wildlife primarily only during construction. By observing the no construction periods in this area and other mitigation, such as helicopter construction (See Table 2-9), no significant wildlife and/or habitat impacts are anticipated in the Book Cliffs. As indicated in the EA, there are significant visual and land use conflicts along Alternative 101 and 102 which, in conjunction with the higher wildlife conflicts in this area, caused these routes to be rejected early in the study process.

2. Potential nesting habitats for raptors are well identified in Figure 3-4. Because specific raptor nesting data are lacking, we would like to expand mitigation measure 27 to stipulate that no development shall occur from the Cameo site to the base of the Bookcliffs between February 1 and July 1; unless, intensive surveys can be performed in a sufficient time frame to ensure nest detection and development of appropriate site-specific mitigation. We are concerned that pre-construction surveys would be performed either before or concurrently with initiation of construction and once commitments for construction are made, raptor nesting areas will be less likely avoided. All surveys, including scheduling, should be designed in consultation with USFWS and CDOW.

3. We are strongly opposed to development of Alternative BB of the Horizon-Fruita segment. The BB Alternative would result in significantly higher impacts to limited riparian habitat and wildlife communities that occupy that habitat than all other alternatives. It makes little sense to use BB when, according to analyses presented on Page 2-12, the "J" route ranks more favorably in five of eight impact criteria. Overall, Alternative BB ranked lowest in compliance.

We appreciate the opportunity to review the Grand Junction Conversion Transmission Line Project EA. Please feel free to contact either myself or Mike Lockhart of our Grand Junction office if you have any questions regarding this memo or if we can be of any further assistance.

cc: CDOW, Grand Junction
FWS, Grand Junction

L. R. Finley

2. PSCC has formally committed to a no construction period throughout the Book Cliffs from December 1 to July 31 to avoid such conflicts. This, combined with annual BLM reconnaissance for active raptor nests, makes a special raptor survey unnecessary (See Page 4-4 of the DEA and Table 2-9 of the DEA).
3. Note that the proposed action for the Horizon-Fruita segment is now Alternative J.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES OFFICE
106 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84158-1197

IN REPLY REFER TO

April 19, 1984

Memorandum

TO: Bob Gervais, Acting Area Manager, Grand Junction Resource Area, Grand Junction, Colorado

FROM: Field Supervisor, Endangered Species Office
U.S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Section 7 consultation for the Grand Junction Conversion Transmission Line Project

We have reviewed you letter of March 26, 1984 and Draft Environmental Assessment (EA) for the Grand Junction Conversion Transmission Line Project.

1 It appears that listed endangered and threatened species, or species proposed for listing, may occur in the area of influence of this action. The following is a list of these species:

Listed Species

peregrine falcon	<u>Falco peregrinus</u>
bald eagle	<u>Haliaeetus leucocephalus</u>
spineless hedgehog cactus	<u>Echinocereus triglochidiatus</u> var. <u>inermis</u>
Uinta Basin hookless cactus	<u>Sclerocactus glaucus</u>
whooping crane	<u>Grus americana</u>
black-footed ferret	<u>Mustela nigripes</u>

We would like to bring to your attention species which are candidates for official listing as threatened or endangered species (Federal Register Vol. 45, No. 242, 15 December 1980, and Vol. 47, No. 251, 30 December 1982). While these species have no legal protection at present under the Endangered Species Act, they are quite rare and restricted. We would ask that you take care to avoid them if they are found in the area.

Candidate Species

ferruginous hawk	<u>Buteo borealis</u>
long-billed curlew	<u>Numenius americanus</u>
mountain plover	<u>Charadrius montanus</u>
razorback sucker	<u>Xyrauchen texanus</u>
Swainson's hawk	<u>Buteo swainsoni</u>
western snowy plover	<u>Charadrius alexandrinus nivosus</u>
western yellow-billed cuckoo	<u>Coccyzus americanus occidentalis</u>
white-faced ibis	<u>Plegadis chihi</u>
Cliffdweller's candlestick	<u>Cryptantha elata</u>
Grand Junction milk-vetch	<u>Astragalus linifolius</u>

U.S.F.W.S. Endangered Species Office (Bolwahn)

1. These species have been referenced in Chapter 3 of the FEA.

The EA should answer the following questions concerning threatened and endangered species:

- 2 A. How would the project affect existing or historic peregrine falcon sites? How close is the proposed project to the sites?
- 3 B. The project has a population of wintering bald eagles. What effect would the proposed project have on winter roost sites and hunting areas?
- 4 C. The draft EA describes prairie dog colonies in the project area. What effects would the project have on these colonies in relation to any black-footed ferrets that may be in them?
- 5 D. The Grays Lake flock of whooping cranes passes through the project area during migration. Whooping cranes have been shown to be vulnerable to powerline strikes. Apparently the small static wire at the top of the powerline is nearly invisible to the cranes. As they rise to clear the larger cables they strike the small static wire and are injured or killed. What effect would this project have on whooping cranes? Are there any feeding and roosting areas near the project site? Authorities on this problem that can be contacted for more information are:

Dr. Rod Drewien
Grayslake National Wildlife Refuge
Wayan, Idaho 83282
phone comm: 574-2174
(205) 574-2175

Gary Halverson
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103
phone FTS: 474-3972

- 6 D. If additional populations of the spineless hedgehog cactus and the Uinta Basin hookless cactus are discovered in the powerline right-of-way what measures to modify the project would be taken to eliminate the impact to these species?

- 7 It is your responsibility to determine if the proposed action "may affect" any of the listed species or critical habitats. You should also determine if the action is likely to jeopardize the continued existence of proposed species or result in the destruction or an adverse modification of any critical habitat proposed for such species. If the determination is "may affect" for listed species you must request in writing formal consultation from the Field Supervisor, Endangered Species Office, U.S. Fish and Wildlife Service at the address given above. In addition, if you determine that the proposed action is likely to jeopardize the continued existence of the proposed species or result in the destruction or adverse modification of proposed critical habitat, you must confer with the FWS. If the determination is "no affect" for listed or proposed species, and this office concurs, no further consultation is required.

2. An historic peregrine falcon nesting area is located northwest of the Cameo Power Plant (See Figure 3-4 in the DEA). It is approximately one quarter mile north of the existing 69-kV line that would be removed and replaced by this project with a 230-kV line. This area has not had active nests for several years. The nearest active nesting area is several miles north of the proposed line. BLM regularly surveys this area for springtime activity and will continue to do so. As a precautionary measure, PSCC will observe a no construction period in the Book Cliffs from December 1 to July 31 to avoid potential conflicts with peregrine falcon and other species. This project is, therefore, expected to have no effect on this species. A final determination will be made for this species in the Biological Assessment to accompany this document.
3. PSCC will observe a no construction period from December 1 to April 1 of crossings through bald eagle winter concentration areas. Only Links 66, 69, and 76 cross areas, and none of these links are included in the proposed alternatives. At all river crossings, PSCC has committed to a horizontal conductor configuration, as well as marking the shield wire. This should make the incidence of strikes with bald eagles extremely rare. The potential for occasional strikes, however, cannot be entirely eliminated. Bald eagles are also being addressed in the Biological Assessment.
4. Ferrets have not been verified within the study area and, based upon prairie dog densities, it is doubtful they do occur in the study area. BLM surveys have not provided any further evidence of their local habitation. If ferrets are ever verified to occur within 0.25 mile of the PSCC 230-kV line right-of-way, PSCC will retrofit the towers with outer perch devices to keep raptors from preying on the ferrets. This species is being addressed in the Biological Assessment.
5. The same precautionary measures identified for bald eagles in Item 3 above are being instituted to avoid collision with whooping cranes. Occasional sightings of portions of the Gray's Lake flock have been made from the study area. These are infrequent and their typical flight pattern brings them high over the study area. There are feeding and resting areas to the west of the study area where they have been more frequently observed. This species is also under consideration in the Biological Assessment.
6. There is a potential population of Uinta Basin Hookless Cactus near the Colorado-Ute Substation. Alternative A of the Grand Junction-Clifton-Colorado Ute between the Colorado River and the substations will be surveyed prior to construction. There is sufficient flexibility in tower spacing and access to prevent disturbances to any individuals of this species. There are no other known populations of these species which would be affected by the proposed alternatives.
7. The issue of "may effect" and "may jeopardize" has been addressed for each T & E species in the Biological Assessment.

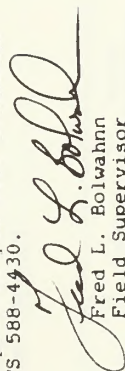
8 Your attention is also directed to Section 1(d) of the Endangered Species Act, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

Specific comments on the DEIS in regard to threatened or endangered species:

Page	Paragraph	Comments
Table 1-9	27	9 Mitigation of impacts is not an alternative under the Endangered Species Act. Projects must be designed to eliminate all impacts to threatened or endangered species. Any reference to T&E species should be removed from this section.
3-7	1	10 The correct varietal name of the spineless hedgehog cactus is <u>inermis</u> . The correct common name for <u>Sclerocactus aeneus</u> is <u>vintran basin hookless cactus</u> . The correct genus name for the <u>blinta Basin hookless cactus</u> is <u>Sclerocactus</u> .

We are prepared to assist you whenever you have questions which we may be able to answer. If we can be of further assistance, please advise us.

The FWS representative who will provide you with technical assistance is Robert Benton, FTS 588-4430.


Fred L. Bolwahn
Field Supervisor

cc: Rod Drewien
Gary Halverson

8. We are aware of this provision. The approach of PSCC has always been to fully and openly coordinate and cooperate with all involved agencies.
9. A separate table (Table 2-12) has been established in the FEA wherein design considerations to preclude impacts to T & E species are identified. All references to mitigation measures for T & E species have been deleted.
10. The spelling of these names has been corrected.

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